DOCUMENT RESUME

ED 329 066 EC 300 060

AUTHOR Lunden, Janet, Ed.
TITLE Guidelines and Procedures for Meeting the Specialized Physical Health Care Needs of Pupils.
INSTITUTION California State Dept. of Education, Sacramento.
REPORT NO ISBN-0-8011-0902-7
PUB DATE 90
NOTE 211p.
AVAILABLE FROM Bureau of Publications, Sales Unit, California Department of Education, P.O. Box 271, Sacramento, CA 95802-0271 ($7.00, plus sales tax for California residents).
PUB TYPE Guides - Non-Classroom Use (055) -- Legal/Legislative/Regulatory Materials (090)

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS *Ancillary School Services; Elementary Secondary Education; *Health Services; Hygiene; Medical Services; *Physical Disabilities; *Special Health Problems; *State Standards

ABSTRACT

This monograph presents the California State guidelines for providing physical health care services within the public school setting. Part I addresses administrative concerns. Included are sections on: education and chronic illness; professional roles; referral and evaluation; guidelines and procedures for transporting chronically ill pupils; staff development models; and school board policy and administrative guidelines. Part II summarizes specialized physical health care services procedures requiring a physician's authorization. These include: anaphylactic reaction--emergency care; catheterization; blood glucose testing for diabetes; glucagon injection (diabetes); hypoglycemia/keto acidosis (diabetes); dysreflexia (hyperreflexia)--emergency care; gastrostomy feeding method or pump; gastrostomy tube reinsertion; intravenous medication and infusion; silastic catheter; mechanical ventilator; nutrition screening; ostomy care; oxygen administration; respiratory assistance; and tracheostomy. Part III considers the prevention of infectious diseases in the form of three lessons which cover: (1) information about infectious diseases; (2) techniques for preventing the spread of infectious diseases; and (3) control of infectious diseases in the classroom setting including diapering and toileting. Part IV reviews routine care not requiring a physician's authorization such as use of braces, canes, casts, crutches, walkers, and wheelchairs. Four appendixes present additional information on program modifications, sample forms, pediatric consultants and nursing personnel, and selected laws and regulations. A glossary is also included. (DB)

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Guidelines and Procedures

for Meeting the Specialized Physical Health Care Needs of Pupils

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CALIFORNIA DEPARTMENT OF EDUCATION
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Guidelines and Procedures

for Meeting the Specialized Physical Health Care Needs of Pupils

Publishing Information

Guidelines and Procedures for Meeting the Specialized Physical Health Care Needs of Pupils was developed by Winnie Bachmann, Consultant, Special Education Division (retired), working with medical professionals, educators, parents, and concerned citizens from throughout California. The names of those involved in the development of the document appear in the acknowledgments.

This publication was edited by Janet Lundin, working in cooperation with Winnie Bachmann. It was designed and prepared for photo-offset production by the staff of the Bureau of Publications, with the cover and interior design created and prepared by Cheryl Shawver McDonald. Typesetting was done by Merribeth Carlson and Jeannette Huff.

This document was published by the California Department of Education, 721 Capitol Mall, Sacramento, California (mailing address: P.O. Box 944272, Sacramento, CA 94244-2720). It was printed by the Office of State Printing and distributed under the provisions of the Library Distribution Act and *Government Code* Section 11096.

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ISBN 0-8011-0902-7

Contents

Page

Preface vi
Acknowledgments vii

Part I
Administrative Concerns I-1

Content of This Publication I-2
Descriptions of the Appendixes I-2

Education and Chronic Illness I-3

Least Restrictive Educational Placement I-3
Pertinent Federal Legislation I-4
Pertinent State Legislation I-4
Procedural Safeguards I-5
Case Law I-5

Scope and Professional Roles I-7

Conditions for Specialized Physical Health Care Services I-7
Definitions I-7
California Codes and Regulations I-8

Referral and Evaluation I-10

Modification of the Regular School Program I-10
Procedures for Acting on Referrals I-10
Decision-making Process I-11
Team Functions I-11
Responsibilities of Participants in Team Meetings I-12
Procedures for Recording the Service I-13
Pupils' Absences I-14

Guidelines and Procedures for Transporting Chronically Ill Pupils I-15

Prior Notification of Transportation Needs I-15
Attendance at Team Meetings I-15
Information About Pupils I-15
Length of Bus Ride I-16
Special Safety Equipment Needs I-16

Staff Development Models I-18

Training Model for the School Nurse I-18
Basic Requirements for the School Nurse I-18
Suggested Components of the Training Plan I-18

Page

Training Model for Bus Drivers I-20
Training Model for Administrators I-21

School Board Policy and Administrative Guidelines I-22

Board Policy I-22
Administrative Guidelines I-22

Part II
Specialized Physical Health Care Services Procedures Requiring a Physician's Authorization II-1

Anaphylactic Reaction: Emergency Care II-2
Catheterization: Clean II-4
Catheterization: Sterile II-7
Diabetes: Blood Glucose Testing II-10
Algorithms for Blood Sugar Results II-13
Diabetes: Glucagon Injection II-15
Diabetes: Hyperglycemia/Keto Acidosis II-17
Diabetes: Hypoglycemia II-19
Quick Reference Sheet for Diabetes II-23
Diabetes Emergency Kit II-24
Dysreflexia (Hyperreflexia) Emergency Care II-25
Gastrostomy Tube/Button: Slow Drip Feeding Method or Pump II-29
Gastrostomy Tube/Button: Syringe Feeding II-33
Gastrostomy Tube Reinsertion II-37
Sample Letter to Doctor Authorizing Gastrostomy Feeding II-40
Intravenous Medication and Infusion (With IV Tube in Place) II-41
Special Precautions for Examining the IV Insertion Site II-42
Administering IV Medication—Procedure II-43
Changing the IV Bottle or Bag—Procedure II-44
Changing the Peripheral IV Tubing—Procedure II-46
Intermittent Peripheral IVs (Injection Caps, Buffalo Caps, and Heparin Locks)—Procedure II-48
Cannula Irrigation—Procedure II-50
Infusion Pump—Procedure II-51

Page

Discontinuing IV Therapy—Procedure II-52
Silastic Catheter–Central Venous Line: General Information (Hickman or Broviac) II-54
Silastic Catheter: Exit Site Care (Hickman or Broviac Catheter) II-56
Mechanical Ventilator II-58
Nutrition Screening II-60
Infant Nutrition Assessment and Counseling II-61
Nutrition Screening (Infants 0–18 Months) II-63
Instructions for Nutrition Screening (DHS 4036 Series) II-65
Nutrition Screening (1–10 Years) II-67
Nutrition Screening (11–20 Years) II-69
Ostomy Care: Emptying or Changing the Ostomy Pouch II-71
Oxygen Administration II-75
Postural Drainage and Percussion II-77
Respiratory Assistance: Inhaler II-83
Respiratory Assistance: Mechanical Nebulizer II-85
Respiratory Assistance: Peak Flow Meter II-89
Asthma Care Zone System II-91
Tracheostomy: Care and Cleaning of Inner Cannula and Stoma II-92
Tracheostomy: CPR for a Child with a Tracheostomy II-96
Tracheostomy: Suctioning II-99
Daily Suctioning Checklist II-103
Tracheostomy: Tube Replacement II-104

Part III
Preventing the Spread of Infectious Diseases III-1

Purpose of Part III III-2
Universal Precautions III-2

Lesson One: Information About Infectious Diseases III-4

Sample Lecture Script III-4
AIDS/HIV Infection III-4
Cytomegalovirus (CMV) III-5

Page

Hepatitis A III-5
Hepatitis B III-5
Herpes III-5

Lesson Two: Techniques for Preventing the Spread of Infectious Diseases III-7

Sample Lecture Script III-7
Handwashing III-8
Gloving III-9
Cleaning Up Spills III-9
Maintaining Personal and Classroom Cleanliness III-9

Lesson Three: Control of Infectious Diseases in the Classroom Setting: Diapering and Toileting III-12

Sample Lecture Script III-12
Diapering III-12
Toileting III-13
Selected References III-13
Handouts for Lessons and Legislation III-14
Handout for Lesson Two: Handwashing III-15
Handout for Lesson Two: Gloving III-16
Handout for Lesson Two: Cleaning Up Spills III-17
Handout for Lesson Two: Maintaining Personal and Classroom Cleanliness III-19
Handout for Lesson Three: Diapering III-21
Handout for Lesson Three: Toileting III-22
Health and Safety Code Section 199.42 ..... III-23
Health and Safety Code Section 199.81 ..... III-24

Part IV
Routine Care Not Requiring a Physician's Authorization IV-1

Brace IV-2
Cane IV-4
Cast IV-5
Crutches IV-7

Page

Prosthesis IV-9
Walker IV-11
Wheelchair IV-12

Appendixes

A. Program Modifications A-1
B. Sample Forms B-1
Parent's Request for Having Specialized Physical Health Care Services Provided B-1
Request for Physician's Authorization for Specialized Physical Health Care Services Performed at School ... B-2
Parent's Authorization for Exchange of Information B-2
Physician's Authorization B-3
Intake Questionnaire–Chronically Ill Pupils B-4
Medical Background B-5
Specialized Care, Equipment, or Provider B-7
Medication B-8

Page

Emergency Plan B-9
Transportation B-10
Site Information B-11
Summary B-12
Specialized Physical Health Care Service: Daily Log of Treatment Administered B-13
C. Pediatric Consultants and Nursing Personnel C-1
Resource Persons from the American Academy of Pediatrics C-2
Sample Contract C-3
Qualifications and Utilization of Nursing Personnel Delivering Health Services in Schools C-4
D. Selected Laws and Regulations D-1
Business and Professions Code D-1
Education Code D-2
California Code of Regulations, Title 5, Education D-3

Glossary G-1

Preface

In passing Assembly Bill 3477 (Chapter 1220, Statutes of 1978), California legislators responded to the needs recognized by parents, the Commission on Special Education, and educators that, for certain pupils to attend school, they must have access to specialized physical health care services. Guidelines and procedures were developed to implement the law and regulations and to ensure the provision of quality care when the services were provided in the schools.

As medical technology advances and early dismissals from hospitals become routine, pupils now arrive at school requiring more intricate procedures and care. Some of the procedures are "one of a kind" and are developed specifically for the pupil.

In response to requests from the California school nurses, under whose directions the specialized physical health services are provided, the *Guidelines and Procedures for Meeting the Specialized Physical Health Care Needs of Students* has been revised and expanded. This revision represents two years of work by physicians and surgeons, nurses, school administrators and teachers, parents, and advocates. Preliminary versions of these guidelines have been widely distributed for review.

These guidelines and procedures should be used or modified, as directed by an attending physician and surgeon, for the specific and unique needs of the pupils for whom these services may be provided.

The contributions to these guidelines from parents, pupils, educators, and members of ancillary professions reflect the points of view of both the service providers and the consumers. While many of the contributors are identified in the acknowledgments, countless others who are not listed reviewed preliminary drafts and made invaluable suggestions.

We hope that these guidelines will be useful in improving and maintaining quality educational programs for California's pupils who need specialized physical health care services.

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Acknowledgments

Appreciation is extended to the persons listed here who contributed to the development of this document. They are listed according to the sections in which they made their contributions. A broad spectrum appears of representatives from schools, universities, and state agencies and from the medical profession and the private sector. The titles and locations of the persons listed were current when this document was developed.

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Special Acknowledgments

Many professionals throughout California and the United States have developed written procedures for several of the specialized health services. All of these procedures were reviewed. In a few cases the previously developed procedures were reformatted and printed in this document with permission from the authors. The Special Education Division, California Department of Education, acknowledges the contributions to this document from the following:

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Part I

Administrative Concerns

During the past few years, children with a variety of medical, psychological, and educational conditions have been identified as needing numerous services from the educational system. From this group the population with severe and chronic illnesses has received a considerable amount of attention from federal and state governments. In addition to the disabilities associated with the illnesses, this group may have secondary disabilities resulting from inadequate opportunities to attend school and the consequent loss of social and educational experiences.

How much the loss of human resources has cost the nation, and California in particular, because of past exclusionary practices is largely unknown. Less than 2 percent of California's total school population has been identified as chronically ill; however, the number of these students is increasing, and their composition is changing. Because of advances in medical technology, conditions that would have caused early deaths have become chronic health problems instead. California's educators face new problems associated with providing for pupils' health needs as well as for their academic and vocational training needs. These guidelines attempt to address the manner and methods of meeting those specialized physical health care needs. This book is divided into four sections that are grouped according to users' needs.

Content of This Publication

Part I defines the terms and addresses the issues relating to the provision of specialized health care services in the school setting. Because chronically ill pupils may be educated in the regular educational program, the special education program, or a combination of both, the suggested enrollment procedures may be applied for any educational placement. Suggested forms accompany each step in the enrollment procedure.

Part II addresses the accepted procedures to use when specialized health care services are provided that have been approved by the pupil's primary care provider. All providers of specialized health care services must be supervised by a school nurse, a public health nurse, or a physician and surgeon who meet the requirements stated in *Education Code* Section 49422. A panel of pediatricians and nurses reviewed these procedures. After much deliberation the panel recommended including only those procedures that, in their professional opinion, do not jeopardize the pupil's health and can be safely provided at school.

Part III fulfills the responsibility of the California Department of Education to update the information provided to local educational agencies concerning the prevention of contagious diseases. Model lecture and class handouts are included for use when educational staff members are being informed about protecting themselves from and preventing the spread of contagious diseases.

Part IV provides guidance and general information for the school nurse as she or he delivers specialized physical health services to pupils with orthopedic conditions. The goal of the content in this section is to protect pupils and teachers from injury in the school environment. This material is *not to be implemented* by the educational staff but to serve as a signal of pupils' needs. In addition, information pages are included on the care of assistive devices, such as braces, casts, crutches, and so forth, which many chronically ill pupils must use.

Descriptions of the Appendixes

The last section of this publication contains four appendixes and a glossary. Appendix A presents suggestions for modifications to the educational program for pupils with specialized physical health care needs. Appendix B contains sample forms for persons who provide and who are seeking specialized physical health care services. Appendix C provides statements from the California District of the American Academy of Pediatrics. Also included in this appendix are a contract delineating the role of the pediatric consultant, a list of resource persons, and a statement concerning the qualifications of nursing personnel delivering health services in schools. Appendix D consists of selected laws and regulations, and the Glossary follows.

Education and Chronic Illness

Because terminology has different meanings for various professions, clarifying certain terms used in this document is essential to minimize misunderstandings.

Professionals use different terms to describe pupils with a chronic health condition. Such pupils are called *chronically ill, other health impaired, medically fragile,* or *technology dependent.* In California professionals generally employ the term *chronically ill* to encompass all pupils, regardless of educational placement, whose medical conditions have the following characteristics: A chronic physical disability, not a temporary condition, is present, resulting in a pupil's having limited strength, vitality, or alertness. This disability presents fluctuating states of health care needs; adversely affects educational performance and/or school functioning, or is likely to do so; and requires supervision to maintain, regulate, or intervene, as appropriate.

Chronically ill also includes pupils who are called *medically fragile* or *technology dependent,* terms which are defined as follows:

1. *Medically fragile* pupils have a physical disability that is life threatening and requires monitoring, interpretation, or intervention.
2. *Technology dependent* pupils have a physical disability that requires a medical device to compensate for the loss of a vital body function.

Any of the pupils having the disabilities defined previously may require substantial and ongoing nursing care to avert death or further disability.

The federal government and many states use the term *other health impaired* in the educational context to define pupils who may be eligible for special education and related services. 34 *Code of Federal Regulations* (*CFR*) 300.5(b)(7)ii states that:

> "Other health impaired" . . . means having limited strength, vitality or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.

In California the generic term *individual with exceptional needs* is used rather than the label of the handicapping condition to describe pupils eligible for and in need of special education and related services. However, pupils with *other health impairments* are deemed eligible by applying the following eligibility criteria in the *California Code of Regulations, Title 5, Education,* Section 3030(f):

> A pupil has limited strength, vitality, or alertness, due to chronic or acute health problems, including but not limited to a heart condition, cancer, leukemia, rheumatic fever, chronic kidney disease, cystic fibrosis, severe asthma, epilepsy, lead poisoning, . . . and hematological disorders such as sickle cell anemia and hemophilia which adversely affects a pupil's educational performance. In accordance with Section 56026 (e) of the *Education Code,* such physical disabilities shall not be temporary in nature as defined by Section 3001 (v).

Least Restrictive Educational Placement

The policy of the California Department of Education is to provide an appropriate educational environment for all pupils enrolled in public schools. Chronically ill pupils may or may not need specialized physical health care services, and they may or may not need special education services or placement in special education programs. The appropriate educational placement for each pupil with health needs is determined on an individual basis. This approach best enables the school district to meet each pupil's unique needs. These needs may be met through regular education placement with supportive school health and pupil personnel services; through special education with related services, or a combination of both; or through home teaching, teleteaching, or a combination of both. Pupils with specialized physical health care needs should participate in public school programs that address the development of their individual learning abilities.

The California Department of Education supports placing and maintaining pupils with a health problem in the regular education classroom, provided that such placement does not adversely affect their educational performance or cause harm to the pupils' physical well-being. Similarly, the medical profession emphasizes that such pupils need to remain in the regular program for as long as possible. Thus, the pupil should be referred to special education only after all of the resources of the regular education program have been considered and, as appropriate, used. Whether a pupil

would benefit from another educational placement depends on whether the pupil's specialized physical health care needs would impede his or her educational performance in that placement.

A pupil who is chronically ill and needs special education and related services should be educated in the least restrictive and most appropriate educational environment. "In selecting the least restrictive environment, consideration is given to any potential harmful effects on the child or on the quality of services which he or she needs" (34 *CFR* 300.552[d]).

Pertinent Federal Legislation

The following federal legislation dealing with pupils who have specialized physical health care needs is summarized: Section 504 of the Vocational Rehabilitation Act; Public Law 94-142; 34 *Code of Federal Regulations*, Part 300.13(b)(10); and Public Law 99-457.

Section 504 of the Vocational Rehabilitation Act

Section 504 of the Vocational Rehabilitation Act (Public Law 93-516) prohibits discrimination against a person because of his or her handicap and requires programs to make reasonable accommodations for the disabled. In addition, the Act requires the accessibility of all public buildings, including schools, to all persons. Therefore, a pupil with health needs has the right to attend school and, when possible, to attend the regular program at his or her neighborhood school. A pupil cannot be denied entry into the neighborhood school because of the specialized physical health care need or because the school is not accessible.

Public Law 94-142

Public Law 94-142, the Education for All Handicapped Children Act, includes the chronically ill, medically fragile, and technology dependent pupils in special education by defining them as *other health impaired* and listing a range of conditions describing this category. However, an additional qualifying eligibility criterion that must be applied to *other health impaired* is that the impairment must ". . . adversely affect the child's educational performance" (34 *CFR* 300.5 [b][7][ii]). This criterion requires the pupil's medical condition to be such that, without special assistance, the pupil's progress in the regular educational program would be impeded. Thus, a pupil whose medical problem poses no major interference to his or her schooling can usually be most appropriately served by placement in the regular education program, with some routine assistance from school health services.

34 *Code of Federal Regulations*, Part 300.13(b)(10)

In 34 *CFR* 300.13 (b)(10) is a list of the school health services among the related services to which a child may be entitled: "*School health services* means services provided by a qualified school nurse or other qualified person." The specific types of services that the school nurse or other qualified person can provide under school health services are not listed. However, the intent is to ensure the availability of health services if they are necessary, as determined through the evaluation process and the development of the individualized education program, to support efforts to provide special education.

Public Law 99-457

Public Law 99-457, Title 1, Handicapped Infants and Toddlers, amended Public Law 94-142 in 1986 to enhance the development of programs to serve handicapped infants and preschoolers, thereby reducing the limiting effects of these pupils' disabilities. The program is to reduce the economic and social costs to society by minimizing the need for special education and related services after the handicapped children reach school age. As a result, the likelihood of institutionalization should be reduced, enhancing the capacity of families to meet the special needs of their children.

Pertinent State Legislation

Sections of the *California Education Code* and of the *California Code of Regulations, Title 5, Education*, apply to providing services for students with specialized physical health care needs.

Education Code

By enacting Assembly Bill 3477 (Chapter 1220, Statutes of 1978), Specialized Physical Health Care Services, California legislators recognized that certain pupils need access to specialized physical health care services to be able to attend school in a regular school setting. To fulfill the intent of the

new law, special educators understood that specialized physical health care services had to be prescribed by the pupil's licensed physician and surgeon.

Specialized physical health care services have the following characteristics:

1. They are necessary during the school day to enable the child to attend school.
2. They can be learned by the average person without requiring prior medical training.
3. They do not require extensive amounts of time for their administration.
4. They do not require a physician to administer them.

California Code of Regulations, Title 5, Education

Sections within the *California Code of Regulations (CCR), Title 5, Education*, contain regulations governing the provision of services to all individuals with exceptional needs, including persons who are other health impaired or chronically ill and who need specialized physical health care services. Sections of this code contain regulations for referring and assessing chronically ill pupils, for providing specialized physical health care services, and for providing instruction in the home or hospital.

Procedural Safeguards

If the local educational agency and the parents of an other-health-impaired pupil disagree about the identification of the pupil as handicapped or about the provision of specialized physical health care services, the parents may request a due process hearing. If the parents request such a hearing, a mediator is assigned to try to resolve the issue before initiating the formal due process hearing. The decisions reached in due process hearings and in court cases form case law that can provide guidance to districts and parents concerned about the education of other-health-impaired pupils.

Case Law

One of the most influential civil suits, *Irving Independent School District* v. *Tatro*, (104 *Supreme Court Reporter* 3371) was heard by the Supreme Court in 1984. In ruling that the provision of clean intermittent catheterization (CIC) was a related service pursuant to PL 94-142, the Court also provided some important guides to the distinction between related services and medical services:

1. If the required health service must be provided during the school hours to enable the pupil to attend school and can be provided by a school nurse or by a lay person trained in the administration of the service, the service is related and must be provided.
2. If the required service does not necessarily need to be provided during the school day, is not necessary to enable the pupil to attend school, or is sufficiently complicated so that it requires a physician for its administration, it does not qualify to be considered a related service.

Similarly, in *Department of Education of State of Hawaii* v. *Katherine D.*, the U.S. Court of Appeals for the Ninth Circuit (which includes California) ruled that medication, suctioning, and tracheal tube readjustment were related services because they were necessary to enable the pupil to attend school and were easily provided by a trained lay person.[1] The ruling also held that any care that assists the pupil to spend part of the school day in the regular classroom can be considered special education.

On the other hand, in *Detsel* v. *Board of Education*[2] and *Bevin H.* v. *Wright*,[3] two federal trial courts (in New York and Pennsylvania, respectively) have held that, under federal special education law, at some point, a child's need for health care services becomes so constant and extensive that federal special education law may not require school districts to provide the services as related services. Where the line is to be drawn is not clear. However, the services required in *Bevin H.*, for example, were described as "varied and intensive" and as requiring the "constant undivided attention of a nurse." The person responsible for the pupil's care could not be responsible for any other children. Because of a need for "constant vigilance" and the "private duty" aspect of the pupil's nursing

[1] *Department of Education* v. *Katherine D.*, 531 *Federal Supplement* 517 (1982).
[2] *Detsel* v. *Board of Education*, 637 *Federal Supplement* 1022 (1986).
[3] *Bevin H.* v. *Wright*, 666 *Federal Supplement* 71 (1987).

services, the court distinguished the case from other cases holding school districts responsible for providing health care services.

These two cases, far from clarifying school districts' responsibilities, have merely added to the confusion. Neither case, however, relieves school districts of their responsibilities to provide education to chronically ill children.

Scope and Professional Roles

Advances in medical technology have enabled increasing numbers of infants and young children to survive the birth process and birth defects. However, many of these individuals require intense and complex types of care. PL 94-142, the Education of All Handicapped Children Act, as amended by PL 99-457, has extended the guaranteed right to a free appropriate public education to include all children. As more and more parents enroll their medically fragile, technology dependent, or chronically ill children in the public schools, conflicting interpretations of the numerous laws and regulations governing the provision of specialized physical health care services in schools emerge.

This section presents a comparison of the language and intent of federal and state laws concerning the provisions of specialized physical health care services to pupils. The content of federal laws PL 94-142 and Section 504 of the Rehabilitation Act is compared with the enabling state statutes, *Education Code* sections 49422 and 49423.5 and the Nursing Practice Act (*Business and Professions Code* Section 2725 et seq.).

Conditions for Specialized Physical Health Care Services

Federal laws and regulations require educational agencies to provide individuals with exceptional needs (handicapped children) with the related services that they need to benefit from their special education programs. The list of examples of related services includes nursing services and medical services.[1] Medical services are limited to evaluating the pupil to assist the individualized education program team in determining the need for special education and related services.

The courts have heard several cases pertaining to the provision of nursing and medical services.[2] Based on recent decisions, the following guidelines are useful in determining whether or not the educational agency is obligated to provide a specified service. The guidelines are that the service:

1. Can be learned in a reasonable amount of time
2. Should not require the presence of a physician, medical judgment from extensive medical training, or an undue amount of time to provide or perform
3. Must be provided or performed during the school day for the pupil to attend school or benefit from his or her educational program
4. Must be ordered by a licensed physician and surgeon

Definitions

The following section includes definitions and discussions related to providing specialized physical health care services. The purpose is to ensure the clarity and consistency of the concepts involved.

Supervision

Supervision means review, observation, and/or instruction of a designated service provider's performance of a specialized physical health care service. Supervision does not necessarily require the immediate presence of the supervisor at all times. Acceptable levels of supervision are defined as follows:[3]

1. Immediate: The supervisor is physically present while a procedure is being administered.
2. Direct: The supervisor is present in the same building as the person being supervised and is available for consultation and/or assistance.
3. Indirect: The supervisor is available to the qualified designated school personnel, either in person or through electronic means to provide necessary guidance, consultation, and referral to appropriate care and services as needed.

[1] *Code of Federal Regulations*, 300.13(10).

[2] See "Case Law" on page I-5.

[3] The preceding statement and the definitions that follow were paraphrased from Section 3051.12(D) of the *California Code of Regulations, Title 5, Education*.

Indirect supervision includes an on-site personal review. Also included is a review of the individual's competence in performing the specialized physical health care service and in maintaining the appropriate records and physical environment and any necessary equipment.

Supervisor

The term *supervisor*, as used in these guidelines, means a qualified school nurse, qualified public health nurse, or qualified licensed physician and surgeon who directs the provision of physical health care services. Supervisors are responsible for ensuring that the direct provision of limited or specified procedures is assigned to persons who are qualified to perform them. The supervisor is responsible for exercising professional judgment in specifying the type, level, and frequency of supervision required for each procedure and shall inform the student study team or the individualized education program team of this determination.

According to Section 49422 of the *Education Code*, "No physician . . . or nurse . . . shall be, nor shall any other person be, employed or permitted to supervise the health and physical development of pupils unless he or she holds a service credential with a specialization in health. . . ."

In areas with low populations, supervision is commonly conducted on behalf of two or more districts, a consortium, or joint powers entities, or through interagency agreements between appropriate public and educational agencies.

Requirements for Qualification

While the requirements for qualification as a direct service provider are found in Section 49423.5 of the *Education Code*, requirements for qualification for the individual supervising such services are governed by Section 3001(t) of the *California Code of Regulations, Title 5, Education*, which states that:

> "Qualified" means that a person has met federal and state certification, licensing, registration, or other comparable requirements which apply to the area in which he or she is providing special education or related services, or, in the absence of such requirements, the state-education-agency-approved or recognized requirements, and adheres to the standards of professional practice established in federal and state law or regulation, including the standards contained in the *California Business and Professions Code*. . . .

This regulation means that any person providing a specialized physical health care service who does not hold an approved license or school nurse's credential must have received specific training to perform the service, demonstrate competence in basic cardiopulmonary resuscitation, be knowledgeable of the emergency medical resources available in the community, and provide such services under the supervision of a qualified individual (*California Education Code* Section 49423.5).

California Codes and Regulations

The following discussion is based on the sections from the California *Education Code* and Nursing Practice Act that deal with the selection and competency of the health care providers and the level of the required supervision.

Assignment of Health Care Services

The individualized education program team is responsible for designating the individuals who are to provide specialized physical health care services. However, in making such designations, the team should consider most the recommendations from those who are knowledgeable about the assessment procedures and qualified to interpret their results. The authority to perform specialized physical health care services in the school setting derives from sections 49422 and 49423.5 of the *Education Code*. Neither a supervising school nurse's credential or license nor a physician's license provides the basis for such authority[4] The qualified health care professional—for example, credentialed school nurse, certificated public health nurse, or licensed physician and surgeon—may train the provider of the specialized physical health care service and certify the provider's level of competency.

According to the California Board of Registered Nursing, the Nursing Practice Act, and the *Education Code*, the nurse is permitted to *supervise* the provision of specialized physical health care services and is authorized to *assign* (not delegate) to nonlicensed personnel the provision of such services. Consequently, the actual provision of the

[4] *Magit v. Board of Medical Examiners*, 57 *California Reports Second Series* 74 (1961).

service, the care of any necessary equipment, and the recordkeeping are being supervised, not the personnel providing the service. The individualized education program team assigns the performance of the service or procedure according to the recommendations of the health care professional. The evaluation of the individual performing the service or procedure is an administrative responsibility of the site administrator.

Competency and the Level of Supervision

The level of supervision (immediate, direct, or indirect) required to administer prescribed medication (*Education Code* Section 49422) and the provision of specialized physical health care services (*Education Code* Section 49423.5) shall be determined by the credentialed school nurse, certificated public health nurse, or licensed physician and surgeon. These professionals shall determine both the competence of the qualified designated persons and the level of supervision required (immediate, direct, or indirect) and shall so inform the student study team or the individualized education program team before these teams designate the person responsible for directly providing the service in question.

To be considered competent, the nonlicensed designated school personnel must meet the training objectives designed by the credentialed school nurse, certificated public health nurse, or licensed physician and surgeon. The Board of Medical Quality Assurance regulates the practice of medicine and also has the authority to discipline physicians. A nurse who supervises nurses' aides, licensed vocational nurses, or nonlicensed personnel trained to perform a health service may be disciplined by the Board of Registered Nurses if she or he knows that the person performing the services lacks the competency to do so safely.[5] This statement means that the school nurse has a duty to ensure the competency of the nonlicensed provider of the health service by assessing the person's skills; providing training, including return demonstrations and scheduling routine on-the-job observations.[6] The nurse should report any incompetencies to the responsible administrator, who should immediately find trained personnel to provide the specialized physical health services while the assigned nonlicensed personnel are being retrained. All of these activities must be documented.

[5] 59 *Opinions California Attorney General* 537 (1976).

[6] *Return demonstration* refers to a situation in which a trainee performs a specialized health care service to demonstrate that he or she has developed the necessary skills.

Referral and Evaluation

A pupil who is disabled, who needs modification of the school program, or who requires a specialized physical health care service or procedure during the school day should not automatically be placed in a special education program. The disability may not adversely affect a pupil's educational performance. The necessary modifications or required service or procedure may be provided within the resources of the regular program.

Parents of a pupil with specialized health care needs may request that their child be identified as requiring special education. However, *providing that the parents agree*, certain activities should be pursued before the pupil is referred for special education. The first consideration should be the regular education program and any possible modification that would allow the pupil to participate within the local school's program. When the parents do not agree with a decision to modify the regular program, they may initiate a referral for special education.

Modification of the Regular School Program

The district should implement its written procedures to ensure that the referral to special education occurs only after the resources of the regular education program have been considered. When appropriate, the regular program should be modified to meet the pupil's needs. Some schools use the student study team to identify the pupil's needs and assist in modifying the regular school program. These modifications may include:[1]

1. A regularly scheduled rest period
2. Modification of the amount of homework assigned for each skill, subject, or content area
3. Two sets of textbooks, one for use at school and the other for home, thereby removing the need for the pupil to carry books to and from school
4. A private area at school, when necessary, in which to administer the specialized health care service
5. Home instruction for the pupil who may need to remain at home periodically because of reasons associated with the chronic health condition

When all minor modifications have been exhausted, a shortened school day may be considered.

Procedures for Acting on Referrals

Suggested procedures follow for parents and the school nurse to observe after a request has been received to provide specialized physical health care services. Parents should do the following:

1. Complete the request for the specialized physical health care services to be provided during the school day. (See "Parent's Request for Having Specialized Physical Health Care Services Provided" in Appendix B.)
2. Complete the authorization for exchange of information with the physician or with the pupil's primary health care provider. (See "Request for Physician's Authorization for Specialized Physical Health Care Services Performed at School" in Appendix B.)

   Note: If a parent requests a "no code" for his or her child, the school nurse or principal of the school should explain that schools must protect the health and safety of all schoolchildren.[2] Therefore, when a pupil appears to be in a medical crisis, the school must either implement emergency procedures specific to the pupil or transport the pupil to the nearest emergency facility.

   If such a medical crisis occurs with a pupil for whom a parent has requested a "no code," the pupil should be sent to the nearest emergency facility and the parent immediately notified.

The school nurse should:

1. Obtain the physician's (or primary health care provider's) written procedures for providing the service. (See the "Physician's Authorization" in Appendix B.)

   If the nurse is providing the school forms to the parent, the appropriate procedure, found in Part II of this document, may be included to facilitate the physician's written reply.

2. Complete the applicable parts of the "Intake Questionnaire–Chronically Ill Pupils" in Appendix B.

[1] See Appendix A for other suggestions.

[2] *No code* means that no emergency procedure shall be given to maintain the pupil's life.

3. Summarize pertinent information concerning the pupil's chronic illness and health service needs. (See "Summary" in Appendix B.)

   The school administrator, student study team, or individualized education program team must have this summary prior to any scheduled meeting.

Decision-making Process

The school site administrator typically receives all pertinent information regarding a pupil, including academic and medical findings. Using the information from the questionnaire and the summary, the administrator may meet informally with staff or schedule a student study team meeting or individualized education program team meeting to determine the steps for appropriately serving the pupil.[3] **The child's parents must be involved in the decision-making process.**

Team Functions

This section contains an enumeration of the responsibilities of the student study team and the individualized education program team. These teams help the education staff to provide the appropriate education and program placement for the pupil who requires specialized physical health care services during school hours.

Function of the Student Study Team

A function of the regular education program, the student study team is a school site team whose responsibilities are to:

1. Clarify the needs of the pupil as well as parental and staff concerns.
2. Develop strategies to modify the regular program to accommodate the pupil's special health needs, if at all possible.
3. Determine the necessity of specialized health care services being provided during school hours.
4. Delineate who will provide the specialized health care services.
5. Determine how the provider will be trained and who will supervise the provision of the service.
6. Develop alternative options when all trained providers of the health service are absent from their work station.
7. Monitor the pupil's adjustment to the modified regular school program.
8. Refer the pupil to the individualized education program team if necessary.
9. Determine who is responsible for documenting the competence of the provider of the specialized physical health care service. (This process includes training, regularly scheduled monitoring, and return demonstrations.)
10. Identify the level of supervision needed.
11. Determine who will administer or monitor any medication needed by the pupil.
12. Identify, when necessary, where medication will be kept securely.
13. Identify the person responsible for notifying the emergency medical service closest to the school site about the pupil's presence and specialized needs.
14. Verify that the physician has outlined steps for the school staff and the bus driver to take while waiting for emergency assistance.

Function of the Individualized Education Program Team

The individualized education program team determines special education eligibility from assessment data and eligibility criteria. The team develops, reviews, or revises the pupil's individualized education program. For the pupil with a chronic illness that adversely affects his or her educational performance, the team also:

1. Determines the necessity of specialized health care services being provided during school hours
2. Delineates who will provide the specialized health care services
3. Determines how the provider will be trained and whether a credentialed school nurse, public health nurse, or licensed physician and surgeon will supervise the provision of the service
4. Determines the appropriate educational placement; for example, regular education program, special education program, a combi-

[3] See pages I-12 and I-13 for a description of the responsibilities of parents and staff during these meetings.

nation of regular and special education, home instruction, or teleteaching
5. Develops alternative options when all trained providers of the health service are absent from their work station
6. Verifies that transporting the pupil will not stress or cause trauma to the chronic health condition
7. Verifies that the physician has outlined steps for the school staff and the bus driver to take while waiting for the emergency assistance to arrive

Responsibilities of Participants in Team Meetings

An administrator may informally consult with knowledgeable members of his or her staff and the pupil's parents or schedule a meeting with the student study team or the individualized education program team to make decisions regarding a pupil's specialized physical health care needs. The site administrator must consult a qualified health care professional. Possible participants in the meetings and their responsibilities are listed in the paragraphs that follow.

Parent or Guardian

The parent or guardian does the following:

1. Identifies family concerns about the pupil's health
2. Shares methods used by the family in providing the health service and handling emergency situations
3. Provides information concerning the pupil's activities outside school
4. Provides information concerning the pupil's academic progress or lack of it
5. Gives written consent when an individualized education program is developed

School Administrator or Designee

The school administrator or designee does the following:

1. Serves as a chairperson of the school meeting
2. Schedules the school meeting, ensuring that all necessary assessments and summaries of assessment data have been completed
3. Distributes the assessment summaries to members of the team *prior to* the scheduled meeting
4. Assists the team with informal assessments or observations
5. Provides support and direction to participants in the meeting
6. Allocates or coordinates school resources, including:
   a. Designating the specialized physical health care service provider
   b. Arranging for materials, such as privacy screen, mat, table, proper lighting, gloves, and so forth
7. Articulates pupil's transportation needs to the director of transportation and provides pertinent information to be given to the bus driver according to a school district's policy
8. Assists in determining program options after taking the following into consideration:
   a. Number of pupils in class
   b. Number of pupils in the class requiring specialized physical health care services
   c. Complexity of health care procedures
   d. Number of staff in class (staff-to-pupil ratio)
   e. Percentage of school nurse's time required for direct and indirect services
   f. Safety of all pupils and staff

School Nurse

The school nurse does the following:

1. Completes a nursing assessment, including an interview with the parent whenever possible
2. Collects the necessary medical recommendations from the pupil's physician
3. Explains the techniques that must be used in the provision of the specialized health service
4. Acts as the liaison between the school and the physician when additional questions need to be answered
5. Reviews the procedures to use in providing the service and any emergency care and assists in the decision-making process
6. Provides a written summary of pertinent information concerning the pupil's chronic illness and the needed health care service *prior to* any decision-making process

7. Provides specific recommendations for the level of supervision of the care provider
8. Provides recommendations for placement

Teacher

The teacher does the following:

1. Provides information about the pupil's academic skills, work habits, and adult and peer relationships
2. Documents any adjustments that, because of the pupil's chronic illness, were made to accommodate the provision of a health service or to accommodate the learning process
3. Identifies areas of concern

Pupil

The pupil, when appropriate, does the following:

1. Identifies areas of self-care
2. Identifies when he or she feels that assistance may be needed
3. Identifies his or her concerns about school placement

Other Resource Persons

Other resource persons do the following:

1. Provide additional assessment data.
2. Provide additional observational data from another point of view.
3. Assist in the problem-solving process.

Contracted Pediatric Consultant

The contracted pediatric consultant does the following:[4]

1. Provides expert consultation regarding situations that could cause injury or illness to the pupil, other students, or staff
2. Explains protocols and procedures for specialized physical health care services and responds to any concerns when these services are provided in the school setting

Transportation Staff

The transportation staff does the following:

1. Identifies available routes and schedules
2. Identifies the special equipment available and assists in identifying temporary transportation alternatives while waiting for the needed equipment, special bus, or bus modification
3. Assigns appropriate staff according to the capabilities of the drivers; for example, ability to lift and to assist in moving the pupil
4. Identifies the district's policies on locations for picking up students
5. Provides the parents with a copy of the district's procedures concerning transportation and the safe riding practices expected of pupils
6. Explains to parents the procedures and practices for evacuating a bus
7. Estimates the cost of the transportation to the administrator to facilitate a budget adjustment

Procedures for Recording the Service

When the pupil has been identified as meeting the eligibility criteria for special education, the related service of specialized physical health care should be indicated on the pupil's individualized education program, along with the pupil's other special education needs. The specialized physical health care service may be the only item on the pupil's individualized education program. In placing the specialized physical health care services on the individualized education program, the team should include the following:

1. The physical health care service to be provided according to the physician's (or primary health care provider's) instructions
2. The position of the designated service provider; for example, a teacher, health care aide, or classroom aide
3. The parent's responsibility to provide all equipment, necessary disposable items, or medication
4. When the service will begin, allowing sufficient time for the service provider to become adequately trained, the transportation to be scheduled, and the bus driver to become knowledgeable about the pupil's condition

A good practice is to record on or attach to the individualized education program the following information:

1. The level of supervision needed
2. The name of the person responsible for

[4] See Appendix C for a sample contract for use by a pediatric consultant that specifies the activities performed for the school.

providing ongoing documentation of competence, a process that includes training, regularly scheduled monitoring, and return demonstration

3. The name of the person responsible for storing and administering medication or monitoring the pupil taking medication
4. The place where the medication will be safely stored
5. The name of the person responsible for notifying the emergency medical service closest to the educational placement about the pupil's potential emergency needs

Pupils' Absences

A good practice is to have an educational plan ready when, for reasons related to the chronic condition, the pupil must remain at home for a week or longer. Such a plan should include the maximum amount of time that can elapse between the parent's notifying the school of the pupil's need to remain at home and the initiation of home instruction.

Guidelines and Procedures for Transporting Chronically Ill Pupils

Transportation is an integral part of the pupil's school day, whether the pupil has been identified as an individual with exceptional needs and placed in a special education setting or is attending the regular school program. Consequently, transportation should be given more than passing consideration throughout the assessment, identification, and planning process. More often than not, specific information about a chronically ill pupil is needed for the district's transportation unit to plan the route, obtain any necessary safety equipment, arrange for the appropriate vehicle, and schedule and provide any necessary in-service training.

Prior Notification of Transportation Needs

The district's transportation department should be alerted to the pending enrollment of a chronically ill pupil when the parents request specialized physical health care services. As soon as the school nurse or the staff person completes the "Intake Questionnaire–Chronically Ill Pupils" in Appendix B, a copy of the information concerning transportation needs, page B-10, and a summary of the pupil's medical needs should be forwarded to the transportation unit.

Before the student study team or individualized education program team meeting, the transportation department must determine whether special equipment is available and whether special in-service training should be scheduled. Later, but before the pupil attends school, the emergency treatment plan developed by the physician for the specific pupil should be on file either at the dispatch office or on the bus transporting the pupil, whichever is appropriate.

Attendance at Team Meetings

Although it is desirable for a member of the district's transportation unit to attend meetings of either the student study team or individualized education program team, this arrangement is not always possible. Bus drivers' schedules and other assignments often prevent attendance at meetings. If a member of the transportation staff is not at the meetings, the school administrator or designee is responsible for informing the parents and team members about any questions concerning transporting the pupil or about any specific problems that need to be solved. It is helpful to have a representative of the transportation unit meet with team members and provide information regarding the unit's policies, procedures, and practices. The team should be aware of the availability of specific equipment or a special bus and the length of time needed to obtain them if they are not currently available to the district.

Before any specific transportation services are placed on the pupil's individualized education program, the transportation department should be consulted. The transportation administrator or designee is responsible for reviewing and/or approving the transportation requested for each special education pupil. The transportation administrator or designee is responsible for reviewing and/or approving the transportation requested for each special education pupil.

Information About Pupils

Information concerning the pupil's special needs must be protected and kept confidential, yet it must be immediately available to the appropriate transportation staff and to any paramedics when an emergency occurs. The geographic characteristics of the district determine how this information is handled. Some districts have the emergency information kept at the bus dispatch office. This location is appropriate if the school bus has a two-way communication system that operates during the entire route and if the system is operable during an emergency; for example, when the bus has a flat tire.

In some districts emergency cards are placed on the bus. The driver can refer to them or give them to the emergency service provider. When information about a pupil is carried by the driver, it must be stored so that only the driver has access. After the route has been completed and the school bus returned to the bus yard, the information must be protected from any unauthorized review. The information could be kept in a locked file overnight. If the driver takes the school bus home rather than to the school bus yard, then other security provisions must be made.

Clear, succinct information in lay terminology must be available to any person providing emergency care. The pupil's specialized physical health care needs do not require detailed explanations. If

the pupil's physician has outlined a specific emergency procedure, its description should be stapled to the pupil's emergency information card. In addition, the emergency card should include:

1. A description of the pupil's diagnosed medical problem
2. A list of the pupil's special limitations (e.g., being blind, deaf, or mute; being subject to seizures) and needs (e.g., need for an artificial airway; need for special lifting; special requirements when being moved)
3. A list of the medication that the pupil is taking, including the time and dosage and the name of the physician prescribing the medication
4. A list of any known allergies
5. The telephone number and address of the emergency facility closest to the bus route
6. The telephone number of the parent or guardian who must be notified of the action taken
7. A description of any special precautions to be taken when the pupil is moved or lifted

Pupils transported on the school bus are supervised by the school bus driver. The driver is responsible for the orderly conduct of the pupils as well as for their safety. Consequently, the bus driver is expected to care for all of the pupils on the bus during any emergency. When a pupil needs urgent care or an accident occurs, the bus driver should immediately call for emergency assistance. If the bus does not have a two-way communication system, the driver may have to ask other drivers passing by to alert the authorities. For these situations the bus may be equipped with a sign that reads, "Driver needs help. Please call 911." Another procedure for emergencies is to identify homes or businesses along the route where someone would immediately dial 911 whenever a bus drove up with the driver honking to signal an emergency.

The driver is expected to be familiar with the emergency procedures for each of the chronically ill pupils being transported. The appropriate transportation staff should be trained for the various aspects of transporting individuals with exceptional needs, including confidentiality of records, behavior management, lifting, bus evacuation, and emergency care. Unless the driver has had specific training in performing the necessary emergency procedures prescribed by a pupil's physician, the driver should initiate only the emergency procedures normally given by a school employee. These procedures can be performed while the driver waits for emergency assistance to arrive. Examples of these procedures are stopping any bleeding, performing the Heimlich maneuver, covering exposed feeding or air tube areas with a sterile gauze pad, loosening clothing, protecting the pupil from hurting himself or herself during a seizure, providing warmth to a pupil in shock, and so forth. Although the bus driver is not required by law to have a certificate for cardiopulmonary resuscitation, having one is a good practice.

Length of Bus Ride

Controlling the exact length of time that a pupil will be on the school bus is difficult. If possible, the transportation department should try to limit a pupil's time on the bus to one hour each way. However, this situation is not always possible because of the distance between the pupil's home and the location of the class, the distance between pupils' homes on the bus route, the time needed for the pupil to board or get off the bus, weather conditions, traffic encountered, bus breakdown, and unexpected hazards.

If the pupil can travel on the school bus for only a limited time and if the distance of the bus route or alternative transportation cannot be shortened to accommodate the pupil, the student study team or individualized education program team should consider alternative means for transporting the pupil to school. A school bus ride or any other ride to school may further harm a pupil's medical condition. If the pupil's medical condition is fragile, the least restrictive environment may be the home or the hospital.

Special Safety Equipment Needs

Prior to transporting the pupil, one must ensure that any additional safety equipment is secured and in place. To sit upright, some pupils will need a special support vest or a special seat. Others will have assistive equipment, such as personal oxygen tanks, specialized chairs, crutches, canes, and walkers, that must accompany the pupil and be

safely secured on the bus. The bus must have adequate space to transport the needed equipment safely.

Some handicapped pupils who use assistive devices may require adaptive boarding equipment. If the bus does not have a lift, alternative equipment will need to be adapted to serve this purpose safely.

When a diabetic pupil is being transported, a diabetic emergency kit must be carried on the bus.[1] This kit must be clearly labeled with the pupil's name.

The bus should be as comfortable as possible, sheltering the pupils from extreme weather conditions. A pupil rarely has a life-threatening condition related to living within a specific temperature. If the pupil's safety is threatened, the school staff should work with the pupil's physician to determine what constitutes a safe bus environment or to identify an alternative means of transportation.

Specific requirements are found in sections 1226, 1227, 1229, 1238, and 1293 of the *California Code of Regulations, Title 13, Motor Vehicles*, concerning loading and unloading procedures and for securing the pupils and their wheelchairs. Local transportation policies must be adopted by the local school district governing board to assist the driver in the proper methods of safely loading and unloading medically fragile pupils. These methods may be adapted to meet the needs of the individual pupil.

[1] See "Diabetes Emergency Kit" in Part II on page II-24.

Staff Development Models

The *Code of Federal Regulations* (34 *CFR* 382) requires an annual personnel development plan based on the assessed needs of anyone engaged in any part of the education of handicapped children. In addition, the California *Education Code* mandates the release of participating school personnel from their regular assigned duties (*EC* 56241 [d]). The requirements of this legislation are fulfilled when school nurses, bus drivers, and administrators are given information on training requirements.

Training Model for the School Nurse

Education Code Section 49423.5 provides that qualified designated school personnel trained in the administration of specialized physical health care services may, under supervision, provide such services.

> *Supervisor*, as used in these guidelines, means a credentialed school nurse, qualified public health nurse, or qualified licensed physician and surgeon who directs the provision of specialized physical health care services. This function includes the responsibility of ensuring that the direct provision of limited or specified procedures is assigned to persons who are qualified to perform them. The supervisor shall have the responsibility to specify the level of supervision required for each procedure and shall inform the student study team or the individualized education program team of this determination.

The authority for supervision and training of other school personnel is authorized by the Nursing Practice Act as well as by the *Education Code*.

Basic Requirements for the School Nurse

The school nurse responsible for implementing specialized physical health care services (SPHCS) must have:

1. Current skills necessary to provide SPHCS, which include using appropriate equipment, supplies, and techniques; recordkeeping; and maintaining the physical environment
2. Related knowledge of medical complications, signs and symptoms, emergency care, and use of appropriate emergency medical resources
3. Competence in cardiopulmonary resuscitation (CPR) and possession of a current certificate
4. Skills in teaching and supervising SPHCS procedures

Suggested Components of the Training Plan

The following steps are presented as a suggested process for the school nurse who is teaching an aide or other personnel how to perform specialized physical health care services:

1. Verify that the learner has a current CPR certificate.
2. Discuss the pupils' rights to confidentiality and privacy.
3. Assess the physical, emotional, and experiential readiness of the person who is to be trained.
   a. Assess the entry-level skills and documented experience of the learner.
   b. Adjust teaching to assessed needs.
4. Prepare for teaching the specialized health care service.
   a. Obtain the approved procedures that are to be taught.
   b. Sequence the steps to be taught to implement the approved procedure.
   c. Prepare handouts giving the steps of the approved procedure, including definitions of medical vocabulary.
      (1) Prepare a handout outlining the care of special equipment or materials and procedures for resolving problems with the equipment.
      (2) Establish a schedule for maintaining necessary supplies.
      (3) Establish the procedure for recording the provision of services on the pupil's log.
   d. Obtain any necessary teaching or demonstration materials and equipment; for example, syringe, suctioning machine, catheter, and so forth.
   e. Set a time and place for the training to occur. The training *may not* be delayed or scheduled over a prolonged time because

that situation would delay the pupil's entry into the program.

f. Establish expected "learner" outcome criteria with behavioral evaluation of competency.
g. Review the handout and any medical terminology.
h. Demonstrate each step for the learner, answering any questions as the demonstration proceeds.
i. Have the learner perform the procedure, progressing from the use of the reference document until the learner can perform the procedure without referring to the document or requiring assistance from the trainer.
j. Document the learner's response. If the learner cannot meet the outcome criteria as demonstrated with 100 percent accuracy and feel competent in performing the procedure, the learner is not ready to perform the service.
k. Demonstrate the proper care of any special equipment or materials. Have the learner repeat any special procedure until it can be performed correctly and without reference to any document.
l. Explain the documentation record until you are satisfied that the learner understands the process.
m. Review procedures to follow if an emergency occurs, as identified by the primary physician who signed the approved procedures.
n. Incorporate a return demonstration. Set up the return demonstration calendar and discuss what will be expected of the learner.

Primary Providers Trained by Other Than the School Nurse

If the local educational agency employs health care assistants whom other public or private agencies have trained to provide the specialized physical health care service, the school nurse has to verify only the health care assistant's competency in providing the service. Any provider of specialized physical health care services who has been trained by other than the credentialed school nurse shall be able to:

1. Demonstrate with 100 percent accuracy the ability to perform the approved physical health care service and to maintain the equipment, supplies, records, and physical environment.
2. Demonstrate during the designated level of supervision continued competency in providing the specialized physical health care service and in maintaining the equipment, supplies, records, and physical environment.
3. Possess a current certificate of competency in CPR and be knowledgeable about emergency procedures.
4. Demonstrate an understanding of the pupil's right to confidentiality and privacy.

Emergency Providers of Specialized Physical Health Care Services

Personnel who are *not* the primary or secondary provider of the specialized physical health care service but who provide backup in extreme emergencies shall:[1]

1. Be trained in the procedure approved for the pupil.
2. Observe the primary care provider performing the service.
3. Have access to the written, authorized procedure.
4. Demonstrate an understanding of the instructions of the approved procedure.
5. Have performed the procedure at least once.

Staff Development for School Nurses

The school nurse must possess and maintain the necessary skills and knowledge related to the ability to perform specialized physical health care services. The local educational agency is responsible for providing the school nurse with training and

[1] The *emergency provider* performs the specialized physical health care service only during an extreme emergency. Such an emergency occurs when the usual provider cannot perform the service because of an injury occurring during a natural catastrophe or while he or she provides the service. The necessary service may be performed until the parents arrive, an authorized emergency service provider arrives, or the pupil is evacuated according to established board-adopted evacuation emergency plans. Continued illness of the primary or secondary provider is not considered an emergency.

education regarding specific procedures ordered for a pupil. To ensure consistency in providing specialized physical health care services, the school nurse should contact, whenever possible, the medical professional who taught the treatment techniques to the pupil's parent or care provider. This knowledge is critical when the nurse trains other personnel and helps maintain the continued competency of the school's provider of specialized physical health care services, ensures daily maintenance of any equipment, and documents the provision of the service. In addition, a good practice is for the nurse to maintain a current list of all school personnel qualified to provide SPHCS to each child requiring such service.

Training Model for Bus Drivers

According to Section 40085 of the *Education Code*, school bus drivers are to receive ten hours of in-service training each year; and, during the fourth year of employment, the ten hours must include classroom instruction.

The paragraphs that follow contain proposed topics to be addressed during in-service training for all bus drivers from the public and private sectors who transport pupils with specialized health service needs.

During the annual in-service training for all bus drivers transporting pupils, one section should be devoted to transporting individuals with exceptional needs. Drivers should be provided information and instructions regarding these pupils' various disabilities and needs for transportation. The bus drivers should also receive instructions concerning pupils' confidential information.

Because some chronically ill pupils have unique and critical health needs, special instructions must be given to their bus driver. Such instruction must be provided before the pupil enters the program and requires transportation services.

Safety Equipment for the School Bus

All buses used to transport chronically ill pupils should have the standard emergency equipment aboard, including a fire extinguisher (two if the bus carries only pupils in wheelchairs), first-aid kit, and a plan for emergency evacuation of the pupils. If the local school board's policy allows the transporting of a pupil's medication on the bus, a good practice, but not a requirement, is for the bus to have a locked receptacle for the safekeeping of medication.

Drivers' Required Proficiency

In accordance with Section 1229 of the *California Code of Regulations, Title 13, Motor Vehicles*, bus drivers are required to have proficiency in operating certain pieces of equipment for the care of special education pupils. Proficiency standards for transporting medically fragile and technology dependent pupils should be defined as performance with 100 percent accuracy. Equipment listed in Section 1229 of the *California Code of Regulations, Title 13, Motor Vehicles*, and additional pieces of equipment associated with the care of other health-impaired pupils are wheelchairs, wheelchair lifts, wheelchair tie downs, support vests, ramps, mull-holland chairs (a chair specially designed for a specific disabled child), gurneys, and infant seats.

First-Aid Requirements

Section 12522 of the *California Vehicle Code* requires every person who operates a school bus to have passed the first-aid practices examination given by the California Highway Patrol. This examination is waived when the bus driver possesses and maintains a current first-aid certificate issued by the American Red Cross or by the U.S. Bureau of Mines.

The *Manual of First-Aid Practices for School Bus Drivers* provides basic principles for handling serious medical emergencies and illnesses that might occur while the pupil is riding the bus.[2] The driver has training relating to seizures, choking, allergic reactions, bleeding, shock, and many other minor medical emergencies.

Additional Good Practices

Most local educational agencies, as well as the California Department of Education, support additional good practice information that bus drivers should have. Bus drivers should be able to:

1. Identify all emergency rooms or stations located within or near the specific bus route.

[2] *Manual of First-Aid Practices for School Bus Drivers*. Sacramento: California State Department of Education, 1986. See the last page in this document for information on ordering this publication.

2. Identify immediately the shortest route to any emergency hospital from any location on the bus route.
3. Obtain additional assistance from police or fire departments or from ambulance services during an emergency.
4. Evacuate the bus in an orderly and timely fashion, including directing and controlling the pupils after they have evacuated the bus.
5. Handle a pupil's medication in the manner approved by the local educational agency.
6. Communicate expectations for pupils' behavior during the bus trip.
7. Know how to lift and carry students off the bus correctly without causing harm to the pupil or to oneself.
8. Be competent in procedures for basic cardiopulmonary resuscitation.

Information for Transporting a Pupil with Specialized Physical Health Care Needs

When a pupil with specialized physical health care needs is admitted to school, the driver, any bus attendant, and the specified substitute driver having the route servicing this pupil shall be given *specific* information on:

1. The pupil's method of communicating with others
2. The pupil's manner of going from home to the bus
3. The pupil's manner of boarding the bus
4. Any special seating arrangements
5. The type of emergency the pupil might have while on the bus, including any allergic reactions that might occur; for example, a bee sting
6. The actions that the bus driver should employ in responding to an emergency for a pupil or for equipment
7. Special instructions if the bus is involved in an accident; for example, methods for carrying the pupil or for handling any type of physical reaction that the pupil might experience
8. Any specific behavioral management plan that is used by the parents or the school or both

When an attendant is riding the bus with a pupil, the bus driver should be informed about the attendant's responsibilities. The attendant should understand that the bus driver has final authority concerning actions taken on the bus.

A good practice is to tape-record the information given to the bus driver so that the instructions and extra information concerning the safe transporting of the pupil may be reviewed later.

Training Model for Administrators

The following is an outline of the procedures and content for a training model for administrators:

1. Present an introduction.
   a. Give an overview of the in-service training.
   b. Identify the goal of the in-service training and criteria for the outcome.
2. Review the pertinent laws and regulations for implementing the provision of specialized physical health care services.
   a. Federal laws and regulations.
   b. State education laws and regulations.
   c. California Nursing Practice Act (*Business and Professions Code* Section 2725) and its implication for the school nurse.
   d. Pertinent legal decisions.
3. Present an introduction to the guidelines.
   a. Provide quality care to the pupil.
   b. Provide samples of necessary forms and the "Intake Questionnaire–Chronically Ill Pupils."
   c. Provide approved procedures for the services.
   d. Provide guidelines to control infectious diseases and to maintain classroom health standards.
   e. Provide training models and references.
   f. Provide a reference for laws, regulations, and definitions.
4. Provide video demonstrations.
   a. Each step of the procedure must be shown for a commonly provided specialized physical health care service; for example, a tracheostomy.
   b. The video must show the procedures in a school setting.
   c. The video must show good lifting techniques, the actual steps of the health service, and good techniques for hand washing.
5. Provide a question-and-answer period.
6. Review the in-service training with an evaluation of whether or not goals were met.

School Board Policy and Administrative Guidelines

Some pupils with chronic illnesses need intense levels and complex types of health care, a modified regular education program, and specialized physical health care services provided during school hours. The Special Education Division, California Department of Education, recommends, therefore, that school district governing boards develop policy and administrative guidelines for enrolling chronically ill pupils and providing services to them. An outline of pertinent data that the policy and procedures should address is presented in the paragraphs that follow.

Board Policy

If a board's policy covering the following items does not exist, school boards may adopt policies pertaining to such matters as:

1. Providing a public education to all children residing within the district
2. Preserving and maintaining all confidential records
3. Transporting pupils' medications on school buses
4. Providing adequate time to train and supervise the service provider to ensure the safety of the pupil

Administrative Guidelines

It is recommended that the administrative staff of the school district develop written guidelines concerning the following general procedures prior to enrolling a pupil requiring specialized physical health care services during the school day:

1. Identify the forms that the local educational agency needs to have completed and signed by the parent; for example:
   a. A yearly parental request for health care services.
   b. A yearly physician's order for treatment which identifies the steps in the provision of the specialized physical health care service. (This order *shall* be signed by the physician, with an approval signature from the parents.)
   c. A yearly emergency card signed by parents, including the physician's instructions on the actions to be taken and authorization for alternative emergency medical service.
2. Identify and train, before the pupil's first day of attendance, the qualified personnel who will be performing the service.
3. Orient the health service provider to the required documentation for the provision of the specialized physical health care service. A written record of each specialized physical health care service, giving the name of the pupil, procedure, date, time, directions, and signature of the person providing the service shall be maintained on a form that the district has approved. (See "Procedures for Recording the Service" on page I-13.)
4. Schedule the transportation and orient the bus driver concerning his or her responsibility to the pupil.
5. Inform the parent, guardian, or caretaker about the board's policy, the administrative guidelines, and behavior expected of pupils on the bus.
6. Have the school administrator or designee and the parents develop a maintenance schedule and method for indicating a need for new supplies. The parent or caretaker is responsible for maintaining any equipment and for providing disposable goods.
7. Identify, with recommendations from the parent or caretaker, the procedure to follow when the qualified trained personnel or any of the back-up providers of the service are not on site because of illness or other emergency.
8. Provide appropriate awareness activities concerning the specialized physical health care needs to the chronically ill pupil's teacher and classmates.

Maintenance of Health and Medical Records

These procedures are to be followed to maintain health and medical records:

1. Identify where the records and forms will be maintained.
2. Identify who has access to the records needed to provide the specialized physical health care service, recording when the records were accessed and why.

Responsible Administrative Unit

An essential step is to establish the administrative functions. To accomplish this need, one must:

1. Designate the appropriate administrative unit within the school district, such as health services, instructional service unit, special education, and so forth.
2. Designate the administrative unit responsible for transportation.

Revision of Administrative Guidelines

Suggestions, questions, or revisions regarding the administrative guidelines should be directed to the administrative unit responsible for the supervision of health services or to the appropriate administrator for redevelopment and final approval by those responsible. If revisions are proposed, the designated school persons responsible for developing and obtaining approval of administrative guidelines shall take appropriate action.

Released Time for Training

If released time is needed for training, the following must be done:

1. Identify the procedure to follow if personnel must leave the school site to complete the specialized physical health care training.
2. Identify the procedure for obtaining released time for staff to train personnel who will provide the service.

Part II

Specialized Physical Health Care Services Procedures Requiring a Physician's Authorization

Disclaimer by the Medical Review Panel

The medical review panel does not recommend that the following procedures be performed at school:

1. Continuous ambulatory peritoneal dialysis
2. Total parenteral nutrition
3. Nasogastric tube feeding
4. Nasogastric tube insertion
5. Postural drainage with percussion

Anaphylactic Reaction: Emergency Care

Anaphylactic reaction is a generalized systemic reaction, which may be fatal, resulting from the administration of foreign substances or drugs, from the digestion of foods, or from the sting of an insect.

THIS IS A CRITICAL MEDICAL EMERGENCY SITUATION.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as a procedural supervisor

II. General Information

A. Anaphylactic reaction (shock) is a potentially life-threatening, severe, and sudden reaction. Symptoms may include:
   1. Apprehension and flushing
   2. Sneezing and coughing
   3. Itching or burning (Itching may indicate a generalized systemic reaction.)
   4. Urticaria (rash), particularly on the face and upper chest
   5. Edema of affected areas, especially the face
   6. Respiratory difficulty, wheezing or shortness of breath (Upper respiratory edema may occur.)
   7. Cyanosis or pallor
   8. Imperceptible pulse

B. Individuals known to have allergies should be encouraged to wear identification tags.

C. Performing the procedure for anaphylactic reaction requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and the parent.

III. Guidelines

A. Purpose
   1. To counteract the adverse reaction to a foreign substance, as prescribed by the personal physician and included in the individualized education program (IEP)
   2. To provide life support cardiopulmonary resuscitation (CPR) if needed

B. Equipment and Medication (Parents are responsible for providing equipment and medication.)

   Provide as ordered by the prescribing physician for the individual pupil. Follow the directions in the epinephrine kit prescribed by the pupil's physician.

Anaphylactic Reaction: Emergency Care—Procedure

Essential steps	*Key points and precautions*	*Child specific**
1. Determine whether the pupil has symptoms of an anaphylactic reaction.	When in doubt, treat the pupil for an anaphylactic reaction.	
CALL PARAMEDICS AT THE BEGINNING OF THE CRISIS.		
2. Administer the prescribed medication according to the physician's and manufacturer's directions.		
3. Establish vital functions. a. Employ resuscitative measures. b. Ensure adequate airway. c. Perform cardiopulmonary resuscitation (CPR) if needed.	Send all information with the pupil who is being transported by paramedics.	
4. Notify the physician and parents.		
5. Record the procedure on the specialized physical health care services (SPHCS) log and permanent health record.		

*The column heading "Child specific" refers to essential steps or precautions that are specifically required for a certain child.

Catheterization: Clean

Catheterization is the insertion of a tube into the urinary bladder.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. Pupil
D. School nurse as a procedural supervisor

II. General Information

A. Intermittent catheterization may need to be done at school according to a time schedule ordered by the physician.
B. The procedure is done by the pupil whenever possible.
C. Pupils who need catheterization may:
   1. Be on a bladder training regimen.
   2. Have no bladder control.
   3. Have residual urine.
D. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and the parent.

III. Guidelines

A. Purpose
   1. To empty the bladder at appropriate intervals
   2. To prevent bladder distention
   3. To reduce chances of a bladder infection
   4. To remove residual urine
   5. To control odors and prevent breakdown of the skin
B. Equipment (Parents are responsible for providing equipment.)
   1. Clean disposable catheter of appropriate size
   2. Cotton balls or 4 x 4's (sterile gauze pads)
   3. Soap and water
   4. A container capable of measuring the output to collect urine
   5. Lubricant if ordered
   6. A container to store the catheter (jar, baggie, and so forth)
   7. Povidone-iodine or other antiseptic solution if ordered
   8. Protective pad
   9. Clean disposable gloves
   10. A separate container large enough to hold all of the pupil's equipment (Both the container and the equipment must be properly labeled with the pupil's name.)

Catheterization: Clean—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Wash hands thoroughly.	Provide privacy. Avoid unnecessary exposure. Place a clean protective pad under the pupil's buttocks to keep contamination to a minimum.	
2. Assemble equipment in an appropriate private location for administration of the procedure.	Have clean disposable gloves available.	
3. Put on gloves.		
4. Have a **female** pupil lie on her back with the knees flexed and separated. A **male** pupil may either lie down or sit up.	Have an adequate light source available.	
5. Wash the genitalia thoroughly with soap and water (or antiseptic solution if ordered) using cotton balls or 4 x 4's.	Separate the labia on a female pupil for thorough cleansing.	
6. Lubricate catheter if ordered.		
7. Separate the labia on a **female** to visualize the meatus. a. Holding the catheter near the tip, insert the catheter into the meatus until urine flows. b. Place the other end into a collection container.	Do not use force. If slight resistance is felt, it may help to twist the catheter.	
8. Hold the penis on a **male** upright at right angles to the student's body. a. Holding the catheter near the tip, insert it into the meatus until urine flows. b. Place the other end of the catheter in the collection container.	This position will straighten the anterior urethra. Do not force. If slight resistance is felt, it may help to twist the catheter.	
9. Instruct the pupil to breathe deeply.	This step relaxes the perineal muscles and helps to overcome resistance to entry.	
10. Hold the catheter in place until urine ceases to flow.	To empty the bladder completely is essential.	

Catheterization: Clean—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
11. Withdraw the catheter gently and slowly.		
12. Make sure that the pupil is dry and comfortable and assist with dressing if necessary.		
13. Discard disposable equipment and waste materials.		
14. If the catheter is to be sent home for use, wash it in soap and water; rinse it with water or a prescribed solution and air dry. Store the catheter in a clean container (baggie or jar) to be sent home with the student.		
15. Measure the urine, discard it, and rinse the container.		
16. Wash hands thoroughly.		
17. Record, on the SPHCS log, the procedure and the appearance and amount of urine.	Report and record any changes in the urine's color, appearance, or odor to the school nurse.	

Catheterization: Sterile

Sterile catheterization is the insertion of a sterile tube into the bladder.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. Pupil
D. School nurse as procedural supervisor

II. General Information

A. Intermittent catheterization may need to be done at school according to a time schedule ordered by a physician.
B. The sterile technique is used when ordered by a physician.
C. Pupils who need catheterization may:
    1. Be on a bladder training regimen.
    2. Have no bladder control.
    3. Have residual urine.
    4. Need medication instilled in the bladder.
D. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and the parent.

III. Guidelines

A. Purpose
    1. To empty the bladder at appropriate intervals and instill medication if prescribed
    2. To prevent bladder distention
    3. To reduce chances of a bladder infection
    4. To remove residual urine
B. Equipment (Parents are responsible for providing equipment.)
    1. Sterile catheterization tray
        a. Sterile gloves
        b. Forceps
        c. Sterile water-soluble lubricating jelly
        d. Collection tray
        e. Cotton balls
        f. Drape
        g. Povidone-iodine or other antiseptic solution
    2. Sterile disposable catheters of appropriate size (if not included in the tray)
    3. Protective pads

Catheterization: Sterile—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Assemble the equipment in an appropriate private location for administration of the procedure.	Provide privacy. Avoid unnecessary exposure.	
2. Wash hands thoroughly.	Have an adequate light source available.	
3. Have the pupil lie on his or her back, with the knees flexed and separated.		
4. Place a protective pad under the pupil's buttocks.	This step will prevent undesired moisture from soiling the surface beneath the student.	
5. Open the catheterization tray using the appropriate sterile technique.		
6. Open the sterile wrap to provide a sterile field.		
7. Open a sterile catheter package and drop the catheter onto the sterile tray if a catheter is not included in the tray.		
8. Put on sterile gloves.		
9. Drape the pupil.		
10. Open the antiseptic solution and pour it over cotton balls in the tray.		
11. Open the packet of lubricating jelly and squeeze it onto the sterile surface.		
12. **Follow these steps for females:**	**Key points for females**	
a. Hold the labia open.		
b. Cleanse each labia with an antiseptic-soaked cotton ball, using a downward stroke.	To prevent infection, stroke downward only once using a clean cotton ball for each stroke.	
c. Cleanse the urinary meatus with a third antiseptic-soaked cotton ball, using a downward stroke.	Continue holding the labia open until the catheter is inserted.	
d. Lubricate the tip of the catheter.		

Catheterization: Sterile—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
e. Insert the catheter about 1 1/2 inches (3.8 cm) into the urinary meatus, and place the other end into the collection tray. If slight resistance is felt, it may help to twist the catheter.	Do not use force. Instruct the pupil to breathe deeply to relax the perineal muscles and overcome resistance to entry.	
13. **Follow these steps for males:**	**Key points for males**	
a. Hold the penis upright and at right angles to the pupil's body when the catheter is inserted.	This position will straighten the anterior urethra.	
b. Hold the end of the penis between the thumb and forefinger and cleanse the meatus using a circular motion.	Use a clean cotton ball for each stroke.	
c. Holding the penis upright, exert slight pressure to widen the opening.		
d. Lubricate the tip of the catheter.		
e. Insert the catheter about 1 1/2 inches (3.8 cm) into the urinary meatus, and place the other end into the collection tray. If slight resistance is felt, it may help to twist the catheter. The pull on the penis can be increased as the catheter is withdrawn slightly then pushed ahead until urine flows.	Do not use force. Instruct the pupil to breathe deeply to relax the perineal muscles and overcome resistance to entry.	
14. Pinch the catheter when the flow of urine ceases and withdraw gently and slowly.		
15. Make certain that the pupil is dry and comfortable.		
16. Discard disposable equipment and waste materials.		
17. Wash hands.		
18. Record, on the SPHCS log, the procedure and the appearance and amount of urine.	Report and record any changes in the urine's color, appearance, or odor to the school nurse.	

Diabetes: Blood Glucose Testing

Blood glucose testing determines the glucose (sugar) level in the bloodstream. The results are measured in milligrams per deciliter (mg/dl).

I. Personnel Involved

A. School nurse
B. Designated school personnel under direct or indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. Information about diabetes appears in "Diabetes: Hypoglycemia."
B. Regular monitoring of blood glucose levels contributes toward proper management of diabetes.
C. Blood glucose testing should be an automatic part of treatment for hypoglycemia or hyperglycemia.
D. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and parent.

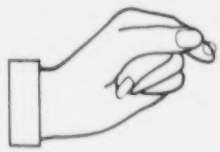
III. Guidelines

A. Purpose
To determine the level of blood sugar at designated testing times or when symptoms of hypoglycemia or hyperglycemia occur (Refer to the procedures under "Diabetes: Hypoglycemia" and "Diabetes: Hyperglycemia.")

B. Equipment

1. Alcohol prep pad (optional)
2. Device to prick finger (Lancet,™ Autolet,™ Autolancet,™ Penlet,™ and so forth)
3. Blood testing strip (Chemstrips,™ Glucostix,™ Glucoscan strips,™ and so forth)
4. Kleenex, cotton ball, or specific blotting material to wipe or absorb blood from the testing strip and to stop bleeding of the finger
5. Latex gloves
6. Log system (school SPHCS log and student logbook if requested)
7. Watch or clock with a second hand
8. Blood testing meter (optional), such as Accucheck,™ Glucometer,™ Glucoscan,™ and so forth

Diabetes: Blood Glucose Testing—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Wash your hands with soap and water and put on gloves.		
2. Make sure that pupils' hands are washed with soap and water as well. Washing with soap and water is sufficient for prepping the site; however, alcohol may be used for further prepping. (The site selected *must be dry* before it is pricked.)	Alcohol may cause toughening of the skin or a burning sensation. If moisture (water or alcohol) remains on the skin, test results may be altered.	
3. Select a site on the top sides of any fingertip. Hang the arm below the level of the heart for 30 seconds to increase the blood flow; then gently squeeze the fingertip in a milking fashion to increase further the supply of blood to the site.	The tops of the fingertips may be sensitive. The *sides* of the fingers have less blood (refer to the picture below). 	
4. Puncture the site with the pricking device. Gently squeeze the finger in a downward motion to obtain a large enough drop of blood to cover the test pad on the test strip (1/8 to 1/4 inch [.32 to .64 cm] in diameter). Too much squeezing of the finger gives inaccurate results.	If the pad is not covered or if blood is smeared, the results may be inaccurate.	

Diabetes: Blood Glucose Testing—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
5. Touch the drop of blood to the test pad portion of the strip, while holding the strip in a level position. Make certain that the blood covers the test pad portion of the strip without smearing.		
6. Begin the timing sequence recommended by the manufacturer as soon as blood is placed on the test pad. The next step is to wipe gently or blot the blood off the test strip. Most test strips require 60 seconds before the blood can be wiped or blotted. Again, follow the manufacturer's instructions.	Too much pressure on the pad can lift some of the color. If a meter is used, follow the instructions in the operating manual that comes with the test meter.	
7. Place the pad along the color blocks provided on the container when the timing is complete. The color block that closely matches the color of the pad is the blood glucose value.		
8. Record the results on the blood glucose log.		
9. Refer to "Algorithms for Blood Sugar Results" on the next page and to the physician's orders to determine which parts of the algorithm are to be followed for management of specific blood sugar levels.		

Algorithms for Blood Sugar Results

(To be implemented after the blood sugar level has been obtained)

CHECK BLOOD SUGAR.

If the results are below 70 mg/dl:

1. Give one fruit exchange (see the list below).
2. Rest for 15 minutes.
3. Recheck blood sugar; if below 70, repeat steps one and two.
4. May repeat these steps up to three times. If no improvement occurs, call the parent or guardian.
5. After symptoms have been resolved, you must give food to stabilize the blood sugar level.
6. Follow these guidelines for giving food:
   a. Allow the pupil to eat a meal or snack early if it is scheduled to be served in one hour or less.
   b. Give an extra protein exchange and bread exchange if the time for the next meal to be served is greater than one hour (see the lists below).
7. Verbally notify the parent or guardian of any low blood sugar incident.
8. Record the incident.

If the pupil becomes unconscious:

1. Call paramedics.
2. Place the pupil on his or her side, ensuring drainage of secretions or vomitus should vomiting occur.
3. Squeeze instant glucose or vanilla frosting in a tube between the gum and cheek or under the tongue and massage the area.
4. Administer 1 mg glucagon intramuscular (IM). (A physician's order is required as well as an approved procedure. [see pages II-10 through II-12.])
5. Give the pupil sips of soda to equal 3 to 6 ounces (90 to 180 ml) if he or she awakens and is able to swallow.

Fruit Exchanges	Protein Exchanges	Bread Exchanges
1/3 cup (79 ml) soda (containing sugar, not dietetic)	1 ounce (28 g) cheese	Six saltines
1/3 cup (79 ml) apple juice	2 tablespoons (60 g) peanut butter	One long graham cracker
1/2 cup (120 ml) orange juice	One egg	One slice bread
1/4 cup (60 ml) grape juice		
10 grams vanilla frosting in a tube		
10 grams instant glucose		
3 teaspoons (14 g) sugar		
2 teaspoons (10 ml) honey		
5 small sugar cubes		
3 large 1 inch (2.54 cm) sugar cubes		

Algorithms for Blood Sugar Results—(Continued)

CHECK BLOOD SUGAR.

If the results are from 70 to 240 mg/dl:

1. Do not give food. Provide sugar-free fluids.
2. Explore other possible causes and follow appropriate protocols if the pupil is not feeling well.

CHECK BLOOD SUGAR.

If the results are above 240 mg/dl:

Check urine for ketones if a kit is available. If a kit is not available, follow the instructions in section B below.

A. If the amount of ketones present in the urine is negligible to small:
   1. Encourage the pupil to drink large quantities of sugar-free fluids.
   2. With a physician's order the school nurse may give insulin to help reduce the blood sugar level.[4]
   3. Return the pupil to class.
   4. Verbally notify the parent or guardian of the incident.
   5. Record the incident.

B. If ketones are moderate to large:
   1. Follow the same instructions as in step A.1.
   2. Follow the same instructions as in step A.2.
   3. Repeat blood sugar (and ketones) testing every two hours.
   4. Allow pupils who feel all right to return to class. Continue to check blood sugar and ketones every two hours until blood sugar level is below 240.
   5. Call paramedics immediately if vomiting or other symptoms of keto acidosis develop (refer to the procedure for hyperglycemia).

[4]Insulin administration is not recommended at school.

Diabetes: Glucagon Injection

Glucagon is a natural hormone that stimulates the liver to release stored sugar in cases of extreme hypoglycemia.

THIS IS A CRITICAL MEDICAL EMERGENCY PROCEDURE.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as a procedural supervisor

II. General Information

A. A glucagon injection is given when extreme hypoglycemia occurs and should be used along with the procedure under "Diabetes: Hypoglycemia."
B. Glucagon is a natural hormone produced by the body and cannot cause harm if given inappropriately.
C. Glucagon stimulates the release of stored sugar in the liver; therefore, if sugar stores are completely depleted, a glucagon injection will not assist in raising the blood sugar level.
D. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and parent.

III. Guidelines

A. Purpose
   1. To raise rapidly the blood sugar level to relieve symptoms of *extreme* hypoglycemia, including unconsciousness and/or seizures
   2. To prevent extreme consequences of severe hypoglycemia, which could include brain damage or death

B. Equipment
   1. A glucagon kit containing a syringe prefilled with diluent and one vial of glucagon powder
   2. Alcohol wipes (if available)
   3. Instant glucose or vanilla frosting in a tube

Diabetes: Glucagon Injection—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Send someone to call the paramedics and then the school nurse and parents.		
2. Place the pupil on his or her side, ensuring drainage of secretions or vomitus should vomiting occur.		
3. Squeeze instant glucose (25 to 30 g tube) or vanilla frosting in a tube (10 grams) between the gum and cheek or under the tongue, and massage the area to expedite absorption.	This provides a sugar source in case the glucagon injection is ineffective in releasing sugar stores from the liver.	
4. Prepare a glucagon syringe: a. Remove the needle cover and vial cap. b. Inject the entire contents of the syringe into the vial. c. With the needle remaining in the vial, rotate the vial gently until the solution is clear. d. Pull back on the plunger to withdraw all the solution into the syringe.		
5. Administer the glucagon. a. Expose and cleanse the injection site (upper, outer area of the thigh, buttock, or upper arm). b. Hold the syringe like a dart. Take care not to contaminate the needle or puncture yourself. c. Insert the needle straight in and inject the glucagon by pushing down on the plunger. d. Withdraw the needle and massage the injection site.	Injection is usually given intramuscularly. It may also be given subcutaneously; however, the absorption is slower.	
6. If a pupil awakens and is able to swallow, give sips of a clear lemon-lime soda or other nondiet soda equaling 3 to 6 ounces (90 to 180 ml).	Nausea and vomiting may occur as side effects of glucagon or extreme hypoglycemia. Juices may aggravate nausea. Providing a clear lemon-lime soda or other nondiet soda is preferred.	
7. Assist paramedics as needed.		
8. Record the procedure on the SPHCS log.		

Diabetes: Hyperglycemia/Keto Acidosis

Hyperglycemia means *high blood sugar.* This term is used when the sugar level in the bloodstream is too high (usually above 160 to 180 mg/dl).

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. Hyperglycemia, if left untreated over a period of days or weeks, may become keto acidosis, a more serious condition.
B. Causes of hyperglycemia include:
   1. Too much food
   2. Lack of exercise
   3. Lack or omission of insulin
   4. Stress or illness
   5. "Rebound" effect from low blood sugar
C. Symptoms of hyperglycemia may include:
   1. Excessive thirst
   2. Excessive urination
   3. Hunger
   4. Lethargy
   5. Dry, flushed skin
   6. Weight loss (prolonged hyperglycemia)
D. Serious symptoms of keto acidosis include:
   1. Nausea and vomiting
   2. Deep, rapid breathing
   3. Fruity breath odor
   4. Coma
E. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and parent.

III. Guidelines

A. Purpose
   1. To reduce the blood sugar level and restore control of diabetes
   2. To assist in preventing the long-term complications of diabetes
B. Equipment (These items may be optional; a program should be implemented as agreed on by the school, family, and physician.)
   1. Urine ketone strip
   2. Blood testing kit
   3. Diabetes emergency kit (Refer to the procedure under "Diabetes: Hypoglycemia.")

Diabetes: Hyperglycemia/Keto Acidosis—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the presence of hyperglycemia either from symptoms or from blood and/or urine testing (refer to "Diabetes: Blood Glucose Testing" or to instructions on the container for urine testing).	If you are unsure whether the blood sugar is low or high, treat the symptoms as hypoglycemia. The immediate effects of low blood sugar can be more detrimental than those of high blood sugar.	
2. Give large quantities of sugar-free fluids. To help reduce the blood sugar level, the school nurse, with a physician's order, may give insulin. Call the parent, school nurse, and/or paramedics immediately if vomiting or other symptoms of keto acidosis develop so that further medical care can be given. 3. Notify the parent so that proper control of diabetes may be regained. 4. Record the incident on the SPHCS log.	Hyperglycemia usually does not cause an ill feeling and can be managed while the pupil continues with class work.	

Diabetes: Hypoglycemia

Hypoglycemia means low blood sugar. This term is used when the sugar in the bloodstream falls below normal (usually below 70 mg/dl).

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as a procedural supervisor

II. General Information

A. Hypoglycemia (insulin reactions) should be treated according to current nursing and medical recommendations.
B. Periodic communication should be maintained between the school nurse and parents of pupils with diabetes to determine the current condition and regimen for treatment.
C. Causes of hypoglycemia include:
   1. Not enough food or a delayed meal
   2. Too much exercise
   3. Too large a dose of insulin
   4. Alcohol and other drugs
   5. Stress or illness
D. Hypoglycemic reactions most frequently occur:
   1. Just before meals or snacks
   2. After strenuous exercise
E. Symptoms of hypoglycemia may include:

Mild symptoms

Headache
Stomachache
Hunger
Sweating
Shaking
Lethargy
Fatigue
Poor coordination

Moderate symptoms

Personality changes
Pale appearance
Dazed look
Glassy eyes
Blurred or double vision
Inability to concentrate
Confusion

Severe symptoms

Restlessness
Combativeness
Convulsions
Coma

F. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and parent.

III. Guidelines

A. Purpose
   1. To provide a source of sugar to relieve symptoms caused by low blood sugar
   2. To prevent severe reactions that may lead to unconsciousness or seizures or both
B. Equipment

   A supply of a sugar source should be kept at school, and the pupil should carry a source of sugar. A diabetes emergency kit is recommended. Place the contents in a lunch pail or plastic container, and label it with the pupil's name, the contents, and "Diabetes Emergency Kit." The kit should be kept in a place known by the pupil with diabetes and by any school staff member who may be treating an insulin reaction. Parents should be notified to replace any item used. If a pupil with diabetes leaves campus (for example, to go on a field trip), the kit should be taken along. (See "Diabetes Emergency Kit" on page II-24. Copies of this page should be given to school bus drivers or to anyone else who may need to pro-

vide emergency treatment to a child with diabetes.) The contents of the kit should include:

1. A 5 by 7 inch (13 by 18 cm) card with a brief history of the pupil's diabetes
2. Sugar: 3 teaspoons (14 g), five *small* cubes, or three packets
3. Honey: 2 teaspoons (10 ml)
4. A sugar-containing soda (preferably clear lemon-lime soda)
5. Apple or orange juice: two 6 ounce (180 ml) cans
6. Vanilla frosting in a tube (10 grams) or instant glucose (25 to 30 g tube)
7. A snack pack of cheese and crackers
8. A copy of this procedure, "Diabetes: Hypoglycemia"

Other items that may be added to the kit on request from the parent and physician are:

- Equipment for testing blood and urine (Include a copy of "Diabetes: Blood Glucose Testing," pages II-10 through II-12.)
- Glucagon kit (injection kit) (Include a copy of "Diabetes: Glucagon Injection," pages II-15 and II-16.)

For treatment of hyperglycemia the kit may include short-acting and long-acting insulin and syringes and needles (see "Diabetes: Hyperglycemia/Keto Acidosis").

Diabetes: Hypoglycemia—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the presence of hypoglycemia either from symptoms or from blood glucose strips (refer to the procedure for blood glucose testing).	**When in doubt, treat the symptoms as hypoglycemia.** The immediate effects of low blood sugar can be more detrimental than those of high blood sugar.	
2. Give *one* fruit exchange immediately.		
Fruit Exchanges		
1/3 cup (79 ml) soda (containing sugar, not dietetic)	The most readily absorbed sugar on the "Fruit Exchanges" list is soda.	
1/3 cup (79 ml) apple juice		
1/2 cup (120 ml) orange juice		
1/4 cup (60 ml) grape juice		
3 large 1 inch (2.54 cm) sugar cubes		
10 grams vanilla frosting in a tube		
3 teaspoons (14 g) sugar	Sugar in a packet or cubes may be dissolved in water for better absorption.	
5 small sugar cubes		
10 grams instant glucose		
2 teaspoons (10 ml) honey	Honey is a last choice because it is more slowly absorbed than the other substances are.	
3. A pupil will usually recover in 10 to 15 minutes. If symptoms persist after 10 to 15 minutes, administer another fruit exchange. Repeat treatment every 10 to 15 minutes until the symptoms subside.		
4. After the symptoms have been resolved, food must be given to stabilize the blood sugar level. If the next meal or snack will be served in one hour or less, allow the pupil to eat the meal or snack early. If the next meal will be served in more than one hour, give an extra bread and protein exchange (give *one* from each of the following categories):	The pupil may return to class if symptoms are resolved.	

Diabetes: Hypoglycemia—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
Bread Exchanges Six saltines One long graham cracker One slice bread **Protein Exchanges** 1 ounce (28 g) cheese 2 tablespoons (60 g) peanut butter One egg		
5. If a pupil becomes unconscious, do the following:		
a. Call paramedics.	Do not try to give any liquids to an unconscious or convulsive pupil.	
b. Place the pupil on his or her side, ensuring drainage of secretions or vomitus should vomiting occur.		
c. Squeeze instant glucose or vanilla frosting in a tube between the gum and cheek or under the tongue and massage the area.	Massage helps sugar to be absorbed.	
d. Administer 1 mg glucagon if ordered by the physician (see "Diabetes: Glucagon Injection").	Glucagon is a natural hormone; *it will not cause harm if given unnecessarily*.	
e. Give sips of soda to equal 3 to 6 ounces (90 to 180 ml) if a pupil awakens and is able to swallow.	Nausea and vomiting may occur as a side effect of the glucagon or from extremely low blood sugar. Juices may aggravate nausea; a clear lemon-lime soda or other nondiet soda is preferred.	
6. Notify the parent and advise follow-up by a physician.		
7. Record the incident on the SPHCS log.		

Quick Reference Sheet for Diabetes

Hypoglycemia Hypo (low) Glycemia (blood sugar)	Hyperglycemia Hyper (high) Glycemia (blood sugar)
Symptoms • The skin becomes pale, cool, and moist. • The patient becomes shaky, nervous, and/or unable to concentrate. • Thirst and urination do not increase. • Symptoms may worsen within minutes. • Administration of sugar resolves symptoms. • Additional symptoms may include: Headache Irritability Stomachache Changes in vision Hunger Restlessness Tiredness Combativeness Poor coordination Convulsions	**Symptoms** • The skin becomes dry, warm, and flushed. • The patient becomes lethargic. The symptoms appearing under "Hypoglycemia" do not occur. • Thirst and urination increase. • Symptoms usually take days or weeks to progress. • Administration of sugar will increase thirst and urination. • Additional symptoms may include: Hunger Fruity breath odor Weight loss Nausea Changes in vision Vomiting

Remember, if you are not sure whether the symptoms are caused by low or high blood sugar, always treat them as though low blood sugar were the cause.

Diabetes Emergency Kit

A diabetes emergency kit should be kept in a place known by the pupil with diabetes and by any school staff member who may be treating hypoglycemia (low blood sugar). If a pupil leaves campus (for example, to go on a field trip), the kit should be taken along. Place the contents in a lunch pail or plastic container. The label should state, "Diabetes Emergency Kit," and should include the pupil's name.

The contents of the kit should include:

1. A 5 by 7 inch (13 by 18 cm) card with a brief history of the pupil's diabetes
2. Sugar: 3 teaspoons (14 g), five small cubes, or three packets
3. Honey: 2 teaspoons (10 ml)
4. Apple or orange juice: two 6 ounce (180 ml) cans
5. A sugar-containing soda (preferably clear or lemon-lime soda)
6. Vanilla frosting in a tube (10 grams) or instant glucose (25 to 30 g tube)
7. A snack pack of cheese and crackers
8. A copy of "Diabetes: Hypoglycemia," pages II-19 through II-23

Other items that may be added to the kit on request from the parent and physician include:

1. Equipment for testing blood and urine (Include a copy of "Diabetes: Blood Glucose Testing," pages II-10 through II-12.)
2. Glucagon kit (injection kit) (Include a copy of "Diabetes: Glucagon Injection," pages II-15 and II-16.)

Dysreflexia (Hyperreflexia) Emergency Care

Dysreflexia is a reflex of the autonomic nervous system, resulting in vasoconstriction and acute hypertension.

THIS IS A SERIOUS MEDICAL EMERGENCY.

All staff shall cooperate in performing appropriate activities as directed by the school nurse handling the emergency. Paramedics should be called at the beginning of the crisis. This procedure is to be sent to the physicians of all pupils with spinal cord lesions at the sixth thoracic vertebra or above. The physician is to specify in writing whether or not this procedure is required.

I. Personnel Involved

The school nurse performs this procedure. (If the school nurse is not on campus, call a paramedic immediately for transporting the pupil to an emergency facility.)

II. General Information

A. Dysreflexia is a serious medical problem that may occur in pupils with quadriplegia who have spinal cord lesions above the sixth thoracic vertebra. **Parents must always be notified when this procedure is implemented.** In most instances, dysreflexia is caused by bladder distention. Secondary causes may be fecal impactions or other stimulation of the bladder or rectal area.

B. Bladder fullness is sensed by the stretch receptors in the bladder wall. This triggers a reflex action of the autonomic nervous system, resulting in vasoconstriction and hypertension. Because of the location of the spinal cord lesion, the nervous system's normal pathways for controlling this reflex action are interrupted. If the condition is untreated, it can precipitate a cerebral vascular hemorrhage (stroke).

C. The individual with quadriplegia and in the sitting position will usually have a blood pressure of 90/60 or lower. A baseline blood pressure for each pupil should be established, monitored periodically, and recorded in the health record.

D. Establish a baseline blood pressure as follows:
   1. Have the pupil in a sitting position.
   2. Obtain morning or afternoon readings for five consecutive school days.
   3. Determine the average reading and record it in the health record.

E. The following are preventive measures:
   1. Avoid bladder distention through routine care of the external or indwelling catheter.
   2. Avoid fecal impaction by maintaining routine bowel care.
   3. Avoid unnecessary stimulation to the viscera by using proper procedures when you are performing urological and rectal treatments.

F. Symptoms of dysreflexia are as follows:
   1. Elevated blood pressure (20 Hg [mercury]) or more above the pupil's baseline blood pressure)
   2. Pounding headache
   3. Diaphoresis (sweating) (Reflex sweating usually begins over the forehead and face, spreading to both arms and the chest.)
   4. Cutis anserina (goose bumps)
   5. Distention of neck veins
   6. Cardiac arrhythmias (irregular pulse)

7. Shivering and hot flashes
8. Flushing or blotching of the face and upper extremities
9. Blocked nasal passages
10. Vague abdominal discomfort

G. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and parent.

III. Guidelines

A. Purpose
To lower blood pressure by relieving bladder distention or fecal impaction

B. Equipment and supplies (Parents are responsible for providing equipment and supplies.)

1. Blood pressure cuff and sphygmomanometer
2. Stethoscope
3. Gloves
4. Irrigating solution
5. Syringe, 30 cc
6. Container to collect irrigation solution
7. Foley catheter of appropriate size

Dysreflexia (Hyperreflexia) Emergency Care—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine whether the pupil has symptoms of dysreflexia.	Refer to the pupil's record for pupil's baseline blood pressure reading.	
2. Place the pupil in a sitting position.	Because of the pupil's lack of vasomotor control, placing the pupil in the sitting position will allow the blood to pool in the lower extremities, thus reducing the blood pressure.	
3. Monitor blood pressure every 3 minutes.	If the blood pressure is almost double the pupil's baseline reading, call paramedics or a rescue unit to immediately transport the pupil to the emergency room.	
4. If the blood pressure is less than double the pupil's baseline, proceed with the remaining essential steps according to the situation as follows:		
a. Do the following for a pupil without an indwelling catheter:	Do not use Credé's method because it increases the pressure on the bladder.	
(1) Tap the bladder lightly and/or pull pubic hair gently.	This step may cause urination, thus relieving bladder distention. Either of these procedures will cause momentary blood pressure elevation.	
(2) If no results occur, catheterize with the Foley catheter and leave in place. Proceed to step c, "Drain as follows."	See the procedure for sterile catheterization, and follow the manufacturer's directions for inflation of the Foley catheter balloon.	
b. Do the following for a pupil with an indwelling catheter to ensure proper drainage:		
(1) Check to make certain that the plug or clamp has been removed.		
(2) Check to make sure that the leg bag is not overly full.		

Dysreflexia (Hyperreflexia) Emergency Care—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
(3) Check for kinks in the catheter or drainage tubing.		
(4) Check the inlet to the leg bag to make sure that it is not corroded.		
(5) Irrigate the catheter slowly with no more than 30 cc of irrigating solution.	This step determines whether the catheter is plugged.	
(6) Remove the catheter if it is plugged and insert a new Foley catheter.		
c. Drain as follows:		
(1) Drain 500 cc of fluid and check the blood pressure.	The bladder must be drained gradually.	
(2) Immediately drain another 500 cc of fluid if the blood pressure is still elevated.		
(3) Wait 10 minutes between each subsequent drainage.	If blood pressure declines after the bladder has been emptied, the pupil will need to be watched closely because the bladder can go into severe contractions causing hypertension to recur.	
d. Inject Nupercainal ointment™ into the rectum if you are sure that the bladder is empty and if the symptoms have not subsided. Wait 5 minutes and recheck the blood pressure. If the blood pressure has come down, gently insert fingers into the rectum and remove any feces present.		
e. If, after 5 minutes, the blood pressure has not come down, call paramedics and transport the pupil to an emergency facility.		
f. Record the procedure on the SPHCS log and health record.		

Gastrostomy Tube/Button: Slow Drip Feeding Method or Pump

An opening is surgically created from the abdominal wall into the stomach. A tube is placed through this opening to provide hydration, feeding, or administration of medications.

I. Personnel Involved

A. School nurse
B. Designated school personnel under direct or indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and parent. Authorization must include the following:
   1. The name of the prescribed feeding and/or medications (Designate whether oral and/or tube methods will be used.)
   2. Amount and/or dosage
   3. Scheduled time for administration at school
   4. Amount of water for flushing the tube

B. Any changes in the procedure will require a physician's written orders.
C. The parent will provide prescribed feeding and/or medications and any necessary equipment for performing the procedures at school.
D. Feeding by mouth will be done only if ordered by the prescribing physician and included in the individualized education program (IEP). If oral feedings are contraindicated, this situation must be documented.
E. The parent will be responsible for adequately securing the tube with an appropriate dressing to prevent inadvertent removal or contamination unless the physician has requested no dressing.
F. The maintenance of an adequately functioning and properly placed gastrostomy tube is the responsibility of the parent under the direction of the prescribing physician. Dislodged tubes will be reinserted only to provide patency (openness) (refer to "Gastrostomy Tube Reinsertion").
G. Pupils who receive gastrostomy feedings usually have special health needs because of increased nutritional risk. Nutrition screening is recommended each time the authorization or reauthorization for feeding is due (see "Nutrition Screening" on page II-60). A letter that can be used to obtain a physician's authorization and share results of nutrition screening is on page II-40.

III. Guidelines

A. Purpose

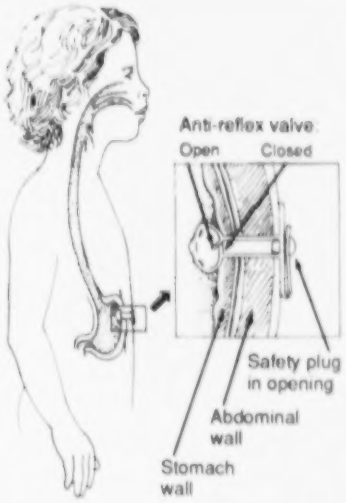
   To provide adequate fluids, nutrition, and/or medications for a person who is unable to swallow safely

B. Equipment
   1. Syringe
   2. Prescribed feeding and/or medication at room temperature
   3. Container for water
   4. Catheter plug and/or clamp
   5. Administration set (bag and tube with medication or feeding) and hanging apparatus (a hanger to suspend the bag so that the substance drips in)
   6. Air-releasing tool (for gastrostomy button only)

Gastrostomy Tube/Button: Slow Drip Feeding Method or Pump—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Assemble equipment and supplies.		
2. Place the pupil in a semisitting position or in a position specified by the physician to facilitate digestion and prevent vomiting. Arrange the pupil's clothing to expose the gastrointestinal tube (GTT) site for continual monitoring during feeding.	Report unusual observations of the GTT site to the school nurse before feeding begins.	
3. Wash hands.		
4. Shake the liquid to be fed if required and measure a prescribed amount into a clean container.	The liquid to be fed should be at room temperature. Refrigerate the contents after opening the container. Discard outdated formula.	
5. Measure the required amount of water into another container for flushing the tube after the feeding.		
6. Prepare the medication and administer it as ordered.		
7. Follow these steps in preparing the administration set:		
a. Clamp the tubing of the administration set.	Use one administration set for no more than three days. Clean it well after each use and allow it to drip dry.	
b. Pour the formula into the administration set and suspend the set from a hanging apparatus, or hang a prepared bag.		
c. Squeeze the drip chamber until it is half full.		
d. Unclamp the administration set tubing until the tubing is filled and reclamp.		
Proceed to step 10 if the button is not used.		
If the button is used, follow steps 8 and 9; omit steps 10 through 14. Proceed with steps 15 through 18.		

Gastrostomy Tube/Button: Slow Drip Feeding Method or Pump—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
8. Introduce the air-releasing tool into the button to check for aspirate (stomach contents). (This step ensures patency).		
9. A clamp is not necessary because the button operates on a one-way valve system. Unplug the button. Attach the tubing on the administration set to the unplugged button and tape the connection securely.		
Use of the Gastrostomy Tube		
10. Attach the syringe to the end of the gastrostomy tube. Unclamp the tubing and lower the syringe until contents of the stomach can be seen.		
11. Raise the syringe slowly to replace gastric juices in the stomach.		
12. Clamp the tubing and remove the syringe from the gastrostomy tube.	Set the rate according to the manufacturer's directions if you are using an infusion pump. The rate at which the machine needs to be set should be specified by the physician.	
13. Attach the administration tubing to the gastrostomy tube, securing the connection with tape.		
14. Open the clamp and regulate the fluid drip manually or with the infusion pump to the prescribed rate.		
15. Check the pupil frequently.	Observe the pupil for regurgitation, vomiting, or abdominal distention. If any of these problems occurs, **stop feeding immediately,** and leave the tube open to relieve pressure and allow the feeding to drain out. Inform the school nurse and document the incident.	
16. Give the pupil a prescribed amount of water when the feeding has been completed.		

Gastrostomy Tube/Button: Slow Drip Feeding Method or Pump—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
17. Clamp the administration set and gastrostomy tube and disconnect it. Secure the gastrostomy tube. If using a button, detach the tubing and plug the button.	Flushing the tubing with water will prevent a buildup of food particles from adhering to the tube, thus obstructing it.	
18. Wash hands.	An unsecured tube can catch on something and be pulled out.	
Postfeeding Care		
1. Check for any drainage around the tube.	Report bleeding or drainage to the school nurse.	
2. Keep the pupil in an upright position or on his or her right side for approximately 30 minutes to prevent vomiting and aspiration. This step also facilitates digestion.	If restlessness, color change, or abdominal distention occurs, immediately inform the school nurse.	
3. Clean the equipment.		
4. Record the procedure on the SPHCS log.		

Gastrostomy Tube/Button: Syringe Feeding

An opening is surgically created from the abdominal wall into the stomach. A tube is placed through this opening to provide hydration, feeding, or administration of medication.

I. Personnel Involved

A. School nurse
B. Designated school personnel under direct or indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. This procedure requires authorization by a physician. The service must be reauthorized yearly by the prescribing physician and parent. Authorization must include the following:
   1. The name of the prescribed feeding and/or medication
   2. Amount and/or dosage
   3. Scheduled time for administration at school
   4. Amount of water for flushing
B. Any changes in the procedures require a physician's written orders.
C. The parent will provide prescribed feeding and/or medications and any necessary equipment for performing the procedures at school.
D. Feeding by mouth will be done only if ordered by the prescribing physician and included in the IEP. If oral feedings are contraindicated, this situation should be documented.
E. The parent will be responsible for adequately securing the tube with an appropriate dressing to prevent inadvertent removal or contamination unless the physician has requested no dressing.

   Under the direction of the prescribing physician, the parent is responsible for maintaining an adequately functioning and properly placed gastrostomy tube. Dislodged tubes will be reinserted only to provide patency (refer to the procedure under "Gastrostomy Tube Reinsertion.")

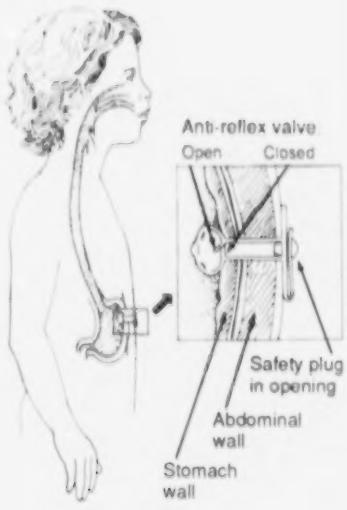
III. Guidelines

A. Purpose

   To provide adequate fluids, nutrition, and/or medications for a person who is unable to swallow safely

B. Equipment
   1. Syringe
   2. Prescribed feeding and/or medication at room temperature
   3. Container for water and formula
   4. Catheter plug, clamp, and rubber band
   5. Air-releasing tool (for gastrostomy button only)
   6. Stand or hook to suspend the substance for feeding if necessary

Gastrostomy Tube/Button: Syringe Feeding—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Assemble the equipment and supplies.		
2. Place the pupil in a semisitting position or in a position specified by the physician to facilitate digestion and to prevent vomiting. Arrange the pupil's clothing to expose the gastrointestinal tube (GTT) site for continual monitoring during feeding.	Report any unusual observations of the GTT site to the school nurse before feeding begins.	
3. Wash hands.		
4. Shake the liquid for feeding if required and measure a prescribed amount in a clean container.	The substance to be fed should be at room temperature. Refrigerate the formula after opening the container. Discard outdated formula and formula that has been opened after 48 hours.	
5. Measure the required amount of water in another container for flushing the tube at the end of the feeding.		
6. Prepare medications and administer them as ordered.		
Proceed to step 11 if the button is not used.		
NOTE: **If the button is used, follow steps 7 through 10; exclude steps 11 through 17.**		
7. Introduce the air-releasing tool into the button to check for gastric contents (this step ensures patency).		

Gastrostomy Tube/Button: Syringe Feeding—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
8. A clamp is not necessary because the button operates on a one-way valve system. Unplug the button. Attach the syringe barrel to the button tubing and snap the tubing into the button opening. Pour the formula or medications into the barrel. Hold the syringe 3 to 6 inches (8 to 15 cm) above the stomach level (gravity pressure opens the valve and allows the formula to enter).	Give the formula slowly to reduce chances of regurgitation or distention. If the button malfunctions or if bleeding or drainage occurs, inform the school nurse.	
9. After feeding has been completed, flush the device with the prescribed amount of water and detach the tubing from the button opening. Plug the button.		
10. **Stop immediately if signs of regurgitation occur.** Detach the tubing from the button and introduce the air-releasing tool to decompress the stomach (the tool is necessary to open the one-way valve).		
Use of the Gastrostomy Tube		
11. Attach the syringe barrel (without plunger) to the GTT. Unclamp and lower the barrel until gas is released or gastric contents are visualized. This ensures proper tube placement in the stomach and checks patency of the tube.	Inform the school nurse if no gas or gastric contents are obtained.	
12. Clamp the tubing.		
13. Pour the formula or medications into the barrel.		

Gastrostomy Tube/Button: Syringe Feeding—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
14. Unclamp the tube and hold the syringe 3 to 6 inches (8 to 15 cm) above stomach level.	The flow is regulated by gravity. Give the formula slowly to reduce chances of regurgitation or distention. If needed, occasionally hold the syringe below the level of the stomach to allow any gas buildup to escape. If the formula will not go in by gravity, try rotating the tube slightly or applying *gentle* pressure with the plunger on the syringe. Notify the nurse if the tube cannot be cleared by any of these means.	
15. Keep adding formula and/or medications without introducing air. After the feeding has been completed, let the amount drain to the bottom of the syringe and clamp the tube.	Observe the student closely. If signs of the regurgitation occur, **stop immediately.** Leave the tube open to relieve pressure and allow the formula to drain out. Notify the school nurse and document the incident.	
16. Flush the gastrostomy tube with the prescribed amount of water to prevent buildup of formula.	Water should be at room temperature.	
17. Clamp the tubing, remove the syringe, replace the plug, and secure the tube.	An unsecured tube can catch on something and be pulled out.	
18. Wash hands.		
Postfeeding Care		
1. Check for any drainage around the tube.	Report bleeding or excessive drainage to the school nurse.	
2. Keep the pupil in an upright position or on his or her right side for approximately 30 minutes to prevent vomiting and aspiration. This position also facilitates digestion.	If restlessness, color change, or abdominal distention occurs, immediately inform the school nurse.	
3. Clean the equipment.		
4. Record the procedure on the SPHCS log.		

Gastrostomy Tube Reinsertion

This procedure is not routine for trained staff unless a situation is designated as requiring prompt medical attention to prevent closure of the ostomy. If the school nurse, physician, or parent is not available, trained staff will provide *ostomy patency only*.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. Parent
D. School nurse as procedural supervisor

II. General Information

A. Securing the gastrostomy tube is the responsibility of the parent. The tube should be held in place with a stockinette dressing or something similar to prevent the tube from catching on objects.
B. Prompt reinsertion of the tube is recommended after it has been dislodged, so that the ostomy remains patent. Delay of reinsertion may cause the ostomy to constrict, a condition which may require surgical intervention or cause painful reinsertion.
C. **If reinsertion is a problem, the pupil should be transported immediately to a physician's office or hospital emergency room.**
D. After trained staff have reinserted the tube, verification of correct placement is the responsibility of the parent.
E. The parent will provide necessary equipment for performing the procedure at school.

III. Guidelines

A. Purpose

To provide ostomy patency to prevent closure

B. Equipment

1. Foley catheter of appropriate size
2. Any water-soluble lubricant
3. Paper tape
4. Gauze 3 by 3 inch (8 by 8 cm) or stockinette
5. Clamp
6. Adaptor, if the catheter has an open inflation funnel
7. Paper towel
8. For inflation of catheter balloon, include:
   a. A syringe to inflate catheter balloon 5 to 10 cc, as ordered by the physician
   b. A needle (22 gauge and 1 inch)
   c. Water or saline solution

Gastrostomy Tube Reinsertion—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Wash hands.	This is a clean, not a sterile, procedure.	
2. Explain the procedure, as appropriate.		
3. Squeeze a small amount of lubricant on a paper towel.	Insertion may be easier if the catheter is lubricated.	
4. Remove the catheter from its sterile package, being careful not to touch the tip.		
5. Lubricate the catheter by rotating it in lubricant on a paper towel; then insert it slowly and gently into the stoma, a distance of 2 to 2 1/2 inches (5 to 6 cm).	If any resistance is felt, stop the procedure. Do not force the tube in; cover the area with sterile gauze and tape the gauze in place. The pupil will need to see a physician as soon as possible.	
6. Withdraw the correct amount (5 to 10 cc or 30 cc) of water or saline with the needle and syringe.	To dispose of a needle, place it in an appropriate sharps container and dispose of the container appropriately when it is full.	
7. Inflate the catheter balloon by injecting water or saline according to the size of the bag (5 to 10 cc or 30 cc). Use these steps with the following types of catheters: a. Plug type: Use a syringe with a needle. b. Valve type: Use a Luer-Lok syringe. Do not use a needle. c. Open inflation funnel: Use a syringe with an adaptor and clamp. Do not use a needle.		
8. Pull gently on the catheter until resistance is met. This technique secures the balloon to the stoma site for proper placement.		
9. Mark the catheter with a nontoxic permanent marking pen approximately 1 inch (2.54 cm) above the stoma with a circle around the tube. This mark provides a placement		

Gastrostomy Tube Reinsertion—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
landmark to ensure that the catheter does not move into the lower stomach and small intestine during peristalsis.		
10. Close the end of the tube with one of the following: a. Use a plastic catheter plug. b. Fold tubing and wrap a rubber band securely around the tube. c. Place a C-clamp on the tube and tighten it.		
11. The tube may be secured with tape or stretch netting, depending on each pupil's need.	A tube that is providing patency only *must* be taped securely in place to prevent dislodging.	
12. Notify the parents and document the entire incident.		
13. Record the procedure on the SPHCS log.		

Sample Letter to Doctor Authorizing Gastrostomy Feeding

Date: _____

Name of patient: _____

Dear Dr. _____:

The authorization needs to be renewed for the gastrostomy feeding at school for the patient named above. Because dietary intake affects classroom performance, we have conducted a nutrition screening. The results have been discussed with the parent and are included below for your information.

Current Measurements

Date: _____ Height: _____ Percentile: _____
Weight: _____ Percentile: _____

Previous Measurements

Date: _____ Height: _____ Percentile: _____
Weight: _____ Percentile: _____
Date: _____ Height: _____ Percentile: _____
Weight: _____ Percentile: _____

Current Intake Orders

Name of formula: _____
Volume in 24 hours: _____
Water: _____ Other: _____ Caloric intake in 24 hours: _____

If the patient receives pureed foods, please see the nutrition screening forms on pages II-61 through II-70.

When you return the authorization for feeding, please include any adjustment of the intake orders.

Thank you,

School Nurse
Additional Comments _____
_____
_____
_____

Intravenous Medication and Infusion (With IV Tube in Place)

Prescribed fluids or medication is administered directly into the vein of the pupil through the use of an established intravenous (IV) line. IVs are not started or restarted at school. When performed at school, this procedure will include adding IV bottles, adding medication into the IV tubing, regulating the rate of flow of the infusion and medication, and removing the needle or catheter when the infusion has been finished, if ordered.

I. Personnel Involved

A. School nurse
B. Registered nurse

II. General Information

A. Intravenous medication may be administered **only** by a registered nurse.
B. This procedure requires a physician's written authorization. The service must be reauthorized yearly by the prescribing physician and parent.
C. All orders for IV fluids and medication must include:
   1. Type of solution
   2. Type and amount of drugs to be added
   3. Rate of flow with total volume to be infused while the pupil is at school
   4. Indications for discontinuing the IV procedure

III. Guidelines

A. Purpose

To provide water, electrolytes, vitamins, proteins, calories, and nutrients for the student who cannot maintain an adequate intake by mouth and to provide a means for the administration of medication

B. Equipment (Parents are responsible for providing equipment.)

Some or all of the following may be included: IV solution and/or medication, IV tubing with drip chamber and clamp, infusion pump, alcohol wipes or other appropriate disinfectant, syringes with small gauge needle, filter, extension tubing, intravenous standard, Luer-Lok, injection cap, sterile gauze dressing, tape, heparinized saline solution, normal saline solution, disposable gloves, covered puncture-resistant container, and plastic-lined waste container.

Special Precautions for Examining the IV Insertion Site

Assess the site for infiltration, inflammation, or infection by noting coolness, erythema (abnormal redness of the skin), swelling, and tenderness. Check the site when the pupil arrives at school, before and after giving medications, and before the pupil leaves school.

Infiltration	Inflammation or Phlebitis	Infection
Causes The cannula becomes dislodged from the vein because of improper securing of the needle, movement or trauma to the IV site, or a defect in the vein.	*Causes* The causes of inflamation or phlebitis may be movement of the cannula within the vein, overuse of the vein, irritating solutions, clot formation, and type and placement of the catheter.	*Causes* The causes of infection may be contamination of any part of the IV system, a break in sterile technique, or transmission within the pupil of an infection from another area of the body.
Symptoms The IV site is puffy, painful, cold, white, and/or hard. The infusion is stopped or slowed. No blood returns in the IV line when the bottle is lowered.	*Symptoms* The IV site is puffy, painful, red, and/or warm. Tenderness develops first at the site and then along the course of the vein. The arm with the IV treatment feels warmer than the other arm.	*Symptoms* The IV site is puffy, painful, red, and/or warm. The pupil may have a fever. There may be purulent drainage (pus) from the site.
Actions Follow the pupil's health care plan, which may include instructions to discontinue the IV, and apply a warm, moist compress to the site. Notify the physician and the pupil's parents.	*Actions* Follow the pupil's health care plan, which may include instructions to discontinue the IV, and apply a cool compress immediately for pain relief. Notify the physician and the pupil's parents.	*Actions* Follow the pupil's health care plan, which may include instructions to discontinue the IV, and apply cold compresses immediately. Notify the physician and the pupil's parents.
Documentation Record the date and time of the observation, the condition of the site, and the actions taken.	*Documentation* Record the date and time of the observation, the condition of the site, and the actions taken.	*Documentation* Record the date and time of the observation, the condition of the site, and the actions taken.

Administering IV Medication—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Review carefully the physician's orders and the pupil's health care plan.		
2. Keep the medication provided by the parent, physician, or IV service in an individual container, with a pharmacy label, for the pupil who is to receive it.		
3. Store the medication in the school at the correct temperature in a secure, locked, clean container or cabinet.		
4. Use a puncture-resistant covered (sharps) container for discarding used needles.	Arrangements must be made with an appropriate laboratory or hospital for proper disposal of this container.	
5. Develop a written practical plan to give the pupil his or her medication on the date and at the time prescribed.	Regular administration protects acceptable blood levels of medication.	
6. Record the procedure on the SPHCS log.		

Changing the IV Bottle or Bag—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need to change the IV infusion container at school to continue the infusion with the same or different solution without contamination or introduction of air into the system.		
2. Tell the pupil what will be done. Ask how he or she is responding to this procedure or medication and how it is managed at home.	Use developmentally appropriate language.	
3. Establish a clean work area close to the pupil.	The sterile technique minimizes the risks of acquired infection.	
4. Assemble the equipment, supplies, and medication.		
5. Wash hands.		
6. Examine the solution and container for contamination or defects.	Obtain a new container of solution if a problem is suspected. Return any questionable solution of IV to the supplier for proper investigation.	
7. Examine the IV insertion site.	Assess the site for infiltration, inflammation, or infection.	
8. Examine the label to ensure that the solution and additives are correct.	Compare what is listed on the label with the physician's written orders.	
9. Clean the top of the container with an alcohol wipe or appropriate disinfectant.	Make sure that alcohol can safely be used in a plastic container.	
10. Clamp the tubing.	This step keeps air out of the system.	
11. Remove the tubing from the old bag or bottle.	If the tubing is to be replaced, see the procedure for "Changing Peripheral IV Tubing" on page II-46.	
12. Insert the tubing connector into the appropriate outlet of the new fluid container.	Observe the sterile technique.	
13. Suspend the container.	Use the height ordered, if any. Make sure that the level of the IV solution is above the level of the IV site.	

Changing the IV Bottle or Bag—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
14. Squeeze the drip chamber and release until it is half-filled.	This step keeps air out of the system.	
15. Examine the tubing for trapped air and remove any air. a. Insert a needle with a syringe into the closest port below the air. b. Clamp the tubing below the port. c. Withdraw fluid and air from the tubing with a syringe.		
16. Adjust the rate of flow, usually with an infusion pump.	Give the volume per hour or drops per minute as ordered by the physician.	
17. Observe the pupil, the IV, and the IV site.	See "Special Precautions for Examining the IV Insertion Site" on page II-42.	
18. Observe for signs of generalized infection, nerve damage from the IV board, circulatory overload, drug overload or reaction, superficial thrombophlebitis, or air embolism.	Follow corrective measures outlined in the pupil's health care plan and the school's emergency policies.	
	Record the date and time, the amount and type of solution infused from the previous bottle (if any), the amount and type of solution and additives hung, the location and condition of the IV insertion site, the pupil's tolerance and understanding of this procedure, any adverse reactions, and any actions taken.	

Changing Peripheral IV Tubing—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need to change peripheral IV tubing at school to prevent or minimize infection related to the IV delivery system and to remove all trapped air from the system.	Review the health care plan of the pupil and the physician's orders. The tubing should be changed at least every 72 hours for continuous infusions and at least every 24 hours for intermittent infusions. This should be done *at home*. The entire system will be changed immediately or discontinued (in accord with the physician's orders) if there is purulent drainage (pus) at the site or if thrombophlebitis, cellulitis, or IV-related bacteremia is noted or suspected.	
2. Provide a clean work area close to the pupil.	Follow sterile techniques.	
3. Tell the pupil what you are doing.	Use developmentally appropriate language.	
4. Assemble the equipment.		
5. Wash hands.		
6. Using the sterile technique, connect the filter and extension tubing (if any) to the new main IV tubing.	Use a 0.22 micron filter, unless contraindicated, to remove particles, bacteria, and air from the IV fluid.	
7. Clamp the new tubing.		
8. Examine the solution or medication for contaminants or defects.	Discard the substance if problems are suspected.	
9. Clean the top of the bottle or bag with an alcohol wipe or appropriate disinfectant.		
10. Using the sterile technique, insert the tubing connector into the appropriate outlet of the infusion bottle or bag.	Squeeze the drip chamber while inserting the tubing connector.	
11. Suspend the container.	Release the drip chamber.	
12. Squeeze and release the drip chamber until it is half full.	This step keeps air out of the delivery system.	
13. Unclamp the new tubing and flush out the air; use gravity, not a pump. Reclamp the tubing.	Do not let the drip chamber run dry.	

Changing Peripheral IV Tubing—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
14. Remove any air bubbles from the tubing.	Insert the needle of a 3 cc syringe into the port below the air. Clamp the tubing below the port. Withdraw fluid and air until all bubbles are gone.	
15. Clamp the old IV tubing and disconnect it from the cannula.		
16. Connect the new IV tubing to the cannula or to a small gauge needle and insert it into an injection cap on the insertion catheter.	Maintain the sterile technique.	
17. Secure with a Luer-Lok device and tape all connections.	This step minimizes the introduction of air and risk of infection.	
18. Adjust the rate of flow, usually with an infusion pump (puts drops per minute into the tube; regulates it).	Give the volume per hour or drops per minute as ordered by the physician. Refer to the procedure for "Infusion Pump" on page II-51.	
19. On the pupil's health record or medication or treatment log, document changing the peripheral IV tubing.	Record the date and time the tubing was changed, the amount and type of solution infused, the amount of solution hung and the time, the pupil's reaction to this procedure, any complications, and any actions taken.	

Intermittent Peripheral IVs (Injection Caps, Buffalo Caps, Heparin Locks)—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need to use intermittent IVs for giving injections at school by reviewing the pupil's health care plan and the physician's orders.	Intermittent peripheral IVs may be used for administering medication and/or solutions by IV push or IV piggyback methods.	
2. Examine the insertion site.	See the "Special Precautions for Examining the IV Insertion Site" on page II-42.	
3. Add the IV medication or solution by:		
a. The piggyback or drip methods	See the procedure for "Changing the IV Bottle or Bag" on page II-44 and the procedure for "Changing Peripheral IV Tubing" on page II-46.	
b. The IV push method (injection in one shot)	Follow steps 4 through 21 to infuse a small amount of medication over a short period of time.	
4. Wash hands.	Follow the physician's orders.	
5. Prepare syringes with medication and saline and heparin solutions.		
6. Cleanse the injection cap with alcohol or appropriate disinfectant.		
7. Insert the normal saline syringe into the injection cap and aspirate slightly.	Following this step confirms the placement of the cannula in the vein.	
8. Inject 1 to 1 1/2 cc normal saline solution.	The saline solution flushes heparin out of the cannula.	
9. Remove the syringe and needle from the injection cap.		
10. Cleanse the injection cap with alcohol or appropriate disinfectant.		
11. Using the medication syringe and needle, inject the medication through the stopper of the injection cap.	The duration of the injection should be the time that the drug manufacturer recommends.	
12. Remove the syringe and needle from the injection cap.		

Intermittent Peripheral IVs (Injection Caps, Buffalo Caps, Heparin Locks)—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
13. Cleanse the injection cap with alcohol or appropriate disinfectant.		
14. Using the saline syringe, inject 1 to 1 1/2 cc normal saline solution.	The saline solution flushes the medication through the cannula.	
15. Remove the syringe and needle from the injection cap.		
16. Cleanse the injection cap with alcohol or appropriate disinfectant.		
17. Using the heparin syringe, irrigate the cannula with the prescribed amount of heparinized saline solution.	Refer to the physician's orders and to the procedure for "Cannula Irrigation" on the next page.	
18. Remove the syringe and needle from the injection cap.		
19. Cleanse the injection cap again.		
20. Observe the pupil for side effects.	Observe the pupil for at least 15 minutes.	
21. On the pupil's health record or medication or treatment log, document the administration of IV infusion or IV push medication.	Record the date and time, the location and condition of the insertion site, the amount and type of medication or solution hung or infused, the duration for administering the medication, the student's reaction, and any actions taken.	

Cannula Irrigation—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need to use cannula irrigation at school by reviewing the pupil's health care plan and the physician's orders.		
2. Wash hands.		
3. Prepare a syringe with heparinized saline solution.	Use the heparin solution ordered by the physician. The recommended dosage is 10 units of heparin per cc.	
4. Clean the injection cap with alcohol or appropriate disinfectant.		
5. Insert the needle of the syringe into the center of the injection cap and inject the heparinized saline solution.	If the irrigation takes place after an infusion of a solution that is incompatible with heparin, the cap must be irrigated with at least 1 cc of normal saline solution before the heparin irrigation begins.	
6. Remove the needle from the injection cap.		
7. Clean the injection cap with alcohol or appropriate disinfectant.		
8. Document the cannula irrigation on the pupil's health record or medication or treatment log.	Record the date and time of the irrigation, the location and condition of the insertion site, the amount and kind of irrigation solution(s) used, any reaction that the pupil experienced, and any actions taken.	

Infusion Pump—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need to use an infusion pump in the school setting by reviewing the physician's orders and the pupil's health care plan.		
2. Verify the type of pump to be used.	A peristaltic pump moves fluid by compressing the IV tubing; piston and cylinder pumps move fluid by pushing it through a cylinder.	
3. Operate the pump according to the manufacturer's instructions.	Carefully review the manufacturer's operating manual and instruction sheets: • When assembling IV equipment • When initiating and maintaining the infusion • Before using an IV filter because some filters will cancel pump pressure or cause inaccurate rates • When checking pump parts • When restarting or temporarily stopping the pump	
4. Regularly check the pump to verify the rate.		
5. Regularly check the insertion site for infiltration.		

Discontinuing IV Therapy—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need to discontinue the IV infusion at school by reviewing the physician's orders.	Refer to "Special Precautions for Examining the IV Insertion Site" on page II-42.	
2. Wash hands.		
3. Clamp the tubing.		
4. Determine the location of the needle or cannula.		
5. Loosen the dressing and tape from the site.	Use care not to disturb the needle or cannula. Have a second person stabilize the limb if needed.	
6. Put on disposable gloves.		
7. Hold a gauze pad lightly over the insertion site while withdrawing the needle or cannula.	Do not use alcohol or disinfectant because it may cause unnecessary discomfort.	
8. Inspect the needle or cannula to determine whether it is intact.	Notify the physician immediately if any portion of the needle or cannula is missing.	
9. Apply and hold pressure on the insertion site until the bleeding stops.		
10. Apply an adhesive bandage or pressure dressing if necessary to prevent renewal of bleeding.		
11. Gently remove the remaining tape and restraints.	Have the pupil assist you as much as possible.	
12. Discard the needle or cannula and tubing in a puncture-resistant, covered container. Remove and discard your gloves. Wash hands.		
13. Notify the parents and physician that the IV was discontinued.	Refer to the physician's orders and pupil's health care plan. **IVs are not started or restarted at school.**	

Discontinuing IV Therapy—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
14. Document discontinuing the IV on the pupil's health record or log for medication or treatment.	Record the date and time of the procedure; the site that the IV was removed from; the reason that the IV was discontinued; the type, rate, and amount of infusion received before the procedure was discontinued; the condition of the insertion site; the condition of the needle or cannula; the pupil's reaction to the procedure; notification of physician and parents; and any problems and actions taken.	

Silastic Catheter–Central Venous Line: General Information (Hickman or Broviac)

I. Overview

A. The Hickman or Broviac catheter is a small flexible tube approximately 35 inches (8.9 dm) long that is placed by a surgeon in the operating room. Two incisions are made:

1. The *entrance site* made in the neck area to locate a vein leading to the heart
2. The *exit site* made in the chest, where the catheter comes out onto the skin

B. The catheter is first pulled through a tunnel created under the skin between the two incisions and then threaded through the vein until it reaches the heart. A cuff around the catheter holds it in place and can sometimes be felt under the skin.

C. Care of the exit site is important. When the catheter is not being used, it must *always* be closed at its hub with a cap.

II. Purpose

The Hickman or Broviac atrial catheter may be used for the following:

Nutritional feedings
Hyperalimentation
IV fluids
Withdrawal of blood
IV medication
Chemotherapy
Blood products

III. Safety Considerations and Implications for the School Nurse

A. The cap should be taped at all times to prevent accidental separation from the catheter.

B. An extra cap should be kept at school at all times.

C. A spring clamp should always be on the pupil.

D. Always have the pupil wear a shirt that can be tucked in to protect the site of the catheter.

E. The catheter should always be taped to a pupil's chest to prevent the catheter from being pulled out accidentally.

F. The catheter should always be clamped when the syringe or cap is being removed.

G. The end of the catheter should never be left open to the air.

IV. Special Considerations About Catheters

A. If breakage occurs, clamp the catheter at once; notify the parent.

B. If the catheter is partially pulled out, to the point of the cuff, tape the catheter to the pupil's chest and notify the parent.

C. If the entire catheter is accidentally pulled out, apply pressure dressing (usually, little bleeding occurs); notify the parent.
If the parent cannot be contacted and bleeding cannot be controlled, call 911.

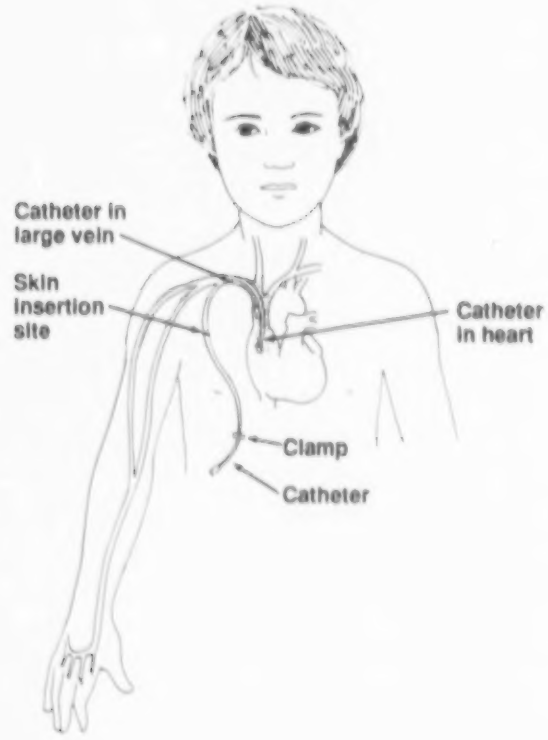
V. Activity Level with a Catheter

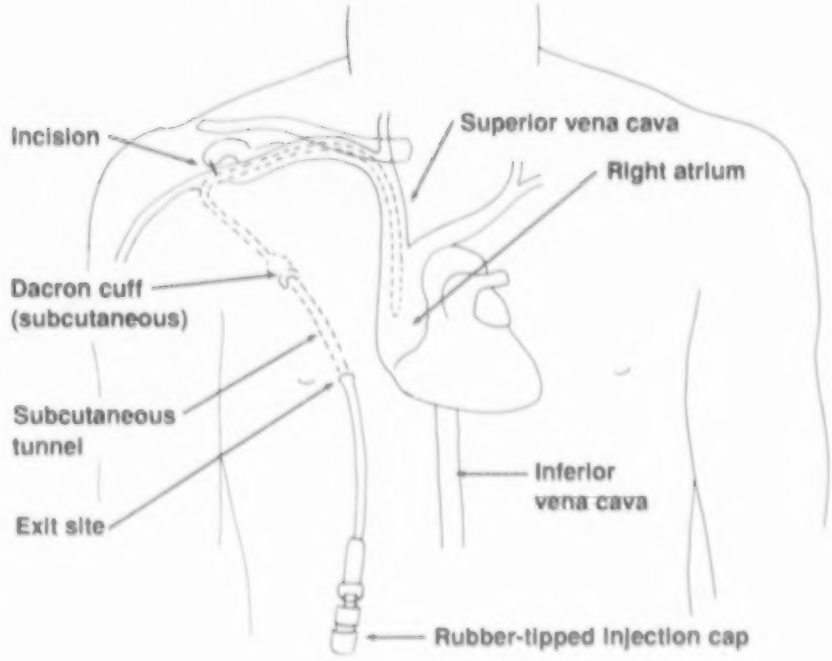
A. Generally, activities are not restricted.

B. Damaging or pulling on the catheter should be avoided.

C. Whether a pupil can participate in swimming, heavy lifting, and other strenuous activities should be specified by the physician.

D. Activities of daily living can be carried out as long as the catheter is taped securely to the pupil's chest.





General Information

Definition: The silastic catheter is a hollow silicone tube approximately 22 inches (56 cm). A patient is placed under general anesthesia, and the tube is inserted into a vein in the neck and advanced until the tip rests in a major vein near the heart or in the right atrium of the heart. The other end of the catheter is tunneled under the skin on the chest and out through a small opening in the skin called the *exit site*. The catheter has a small dacron cuff buried approximately one inch (2.54 cm) under the skin above the exit site. The dacron cuff combined with tunneling of the catheter anchors the catheter and acts as a barrier to infection. The silastic catheter may have either a single or a double lumen.

Silastic Catheter: Exit Site Care (Hickman or Broviac Catheter)

The change of dressing at the exit site of the silastic catheter is presented. The procedure should be performed at school ***only*** if the dressing becomes wet, loose, or dirty.

I. Personnel Involved

A. School nurse
B. Registered nurse or licensed vocational nurse
C. School nurse as procedural supervisor

II. General Information

A. Healing of the exit site takes from ten days to one month after the catheter has been inserted.
B. The dressing at the exit site should be changed at home every day until the area has healed well enough to prevent infection.
C. Approximately one month after the catheter has been inserted, the dressing at the exit site should be changed every 48 hours and/or when the dressing becomes wet, loose, or dirty.

III. Guidelines

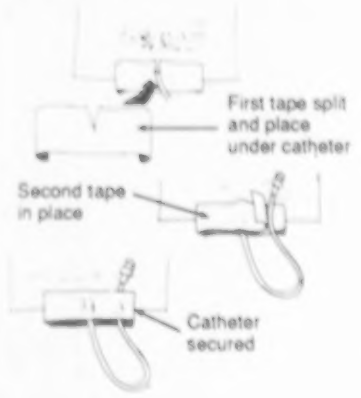
A. Purpose
   1. To prevent secondary infection around the exit site and to preserve the integrity of the skin
   2. To maintain cleanliness of the catheter and surrounding tissues
   3. To observe, on a regular basis, the condition of the exit site and placement of a catheter

B. Equipment
   1. Hydrogen peroxide
   2. Cotton-tipped swabs
   3. Povidone-iodine swabs
   4. Antibacterial ointment
   5. Alcohol wipes
   6. Sterile 2 by 2 inch (5 by 5 cm) gauze pads
   7. Tape

Silastic Catheter Exit: Site Care (Hickman or Broviac Catheter)—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Prepare a clean working area and thoroughly wash your hands.		
2. Remove and discard the old dressing.	Place soiled dressings and supplies in double bags.	
3. Check the catheter for any sign of slippage.		
4. Check the exit site for signs of inflammation or infection.	Check for redness, swelling, purulent drainage, and so forth. (Notify the parent and/or physician if these symptoms are observed.)	

Silastic Catheter: Exit Site Care (Hickman or Broviac Catheter)—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
5. **Never use scissors when you are working with a dressing.**	A risk of nicking or cutting the catheter is likely.	
6. Clean the skin around the exit site with a cotton-tipped applicator that has been dipped in hydrogen peroxide.	Use a circular motion starting at the exit site and clean outward for about 4 inches (10 cm) in diameter. Use as many as six to eight swabs so that the site is clean.	
7. Using povidone-iodine swabs, clean the site in a circular motion, as explained in the key point opposite step 6.	Two or three swabs containing povidone-iodine may be needed. **Omit this step if the pupil is allergic to iodine.**	
8. Clean the catheter with an alcohol wipe, starting near the exit site and moving outward.	**Do not tug or pull on the tubing.**	
9. Apply a small amount of antibacterial ointment to the exit site.	If the exit site has healed well (approximately one month), you may omit this step. Include step 9 if the exit site becomes inflamed or when notified that the pupil's ability to fight infection is low.	
10. Place one 2 by 2 inch (5 by 5 cm) gauze pad under the exit site of the catheter and place another pad over the exit site. Cover the site with another pad and tape the edges securely in place.		
11. Loop the catheter and tape it on top of the dressing. **The catheter should never be allowed to hang loose.**		

Mechanical Ventilator

Caution: Most pupils who depend on a mechanical ventilator have a licensed care provider in the home. These pupils should attend school only when accompanied by this licensed care provider. In some situations the care provider is not present 24 hours per day. In these instances the care provider's hours should coincide with the hours of the school. The family should assume responsibility for the pupil when the care provider is not on duty.

A mechanical ventilator helps a person to breathe who cannot do so sufficiently to sustain life.

I. Personnel Involved

A. School nurse
B. Registered nurse or licensed vocational nurse
C. School nurse as procedural supervisor

II. General Information

A mechanical ventilator is for use with pupils who have damage to the spinal cord or brain stem, resulting in their inability to sustain breathing. This device is used to provide:

A. Rest for a patient who has severe pulmonary disease that affects the ability to breathe sufficiently (Difficulty in breathing may be caused by lung, skeletal, muscular, and/or neurological damage.)
B. Ventilation for a pupil who has sleep apnea (cessation of respiration)
C. Ventilation for a pupil having apnea

III. Guidelines

A. Parents are responsible for providing and maintaining all necessary equipment.

B. The following equipment should be checked daily for availability and working order:

1. Source of power
   a. Electrical wall outlet with appropriate grounding adaptor
   b. Battery pack mounted on a wheelchair or cart if the pupil is to be mobile
2. Source of oxygen
3. Patency (openness) of the tube
4. Leaks in connection sites
5. Source of humidification

C. The settings must be made according to the physician's order and **checked daily at the beginning of the school day.**
1. Pressure gauge (measures the pressure of air or gas that is to be delivered to the pupil with each breath)
2. Respiratory gauges
   a. Tidal volume dial (measures the depth of breath)
   b. Minute volume dial (measures the number of breaths and gives the time for a specific volume in a full minute)
   c. Respiratory rate (number of breaths in a minute)
   d. Inspiratory time (length of time for inspiration)
   e. Expiratory time (length of time for exhalation)

D. Each dial has a high and low alarm and a disconnect alarm. This helps to prevent accidental delivery of too much or too little volume or pressure. The alarm will sound if secretions are accumulat-

ing in the patient's airway or if there is a disconnection. **Alarms should never be disconnected.**

E. Numerous types of ventilators are available. The school nurse should have a copy of the operating manual and the name and telephone number of the respiratory home equipment company.

F. For all patients with ventilators, a resuscitation bag and source of emergency backup power must be readily available at all times.

IV. Ventilator Emergency Procedure

A. If an alarm is sounding, check which one, identify the cause, and correct the problem.

B. If the cause is not readily apparent, immediately notify the licensed care provider and school nurse.

C. If the pupil is in obvious distress, notify the emergency medical services (911), disconnect the pupil from the machine, and manually bag (resuscitate) the pupil until the cause of the alarm is found.

D. After the problem has been remedied, reconnect the pupil to the machine.

Nutrition Screening

Nutrition screening is a process by which components of nutritional health (diet, feeding, laboratory values, and growth) are reviewed to identify pupils who are at risk for nutritional deficiencies.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as indirect procedural supervisor

II. General Information

A. Pupils with special health needs are at risk for poor nutrition. Delayed feeding skills, need for special diet, and interactions of nutrients or drugs are prevalent in the pupil with special health care needs. These pupils may not consume the proper amounts and kinds of food needed to provide adequate nutrients, energy, fluids, and fiber.
B. A pupil without an adequate diet is less alert, has less resistance to infection, and has shorter attention spans and lower growth rates than well-nourished pupils have.
C. The school is an appropriate place to perform nutrition screening because pupils have meals at school and the quality of a child's nutrition affects learning, one of the primary tasks of childhood.

III. Guidelines

A. Nutrition screening is recommended on at least a yearly basis. This procedure may also be done at the request of the parent, teacher, therapist, or nurse.
B. For samples of screening tools, see "Nutrition Screening (Infants 0–18 Months)," "Nutrition Screening (1–10 Years)," and "Nutrition Screening (11–20 Years)" on the pages that follow.
C. Procedure
   1. Review the pupil's school health record for nutritional health information.
   2. Interview the parent or guardian (in person or by phone) to identify nutritional concerns. Use the screening forms cited in the preceding item B.
   3. Measure the pupil's height and weight and compute the percentiles when appropriate equipment is available.
   4. Review the results with the parent or guardian and make a referral when indicated. For nutritional services the pupil may be referred to a private physician, regional center, CCS case manager, or county health department.

Nutrition Screening (Continued)

Part I - Milk Feeding - INFANT NUTRITION ASSESSMENT AND COUNSELING

Plot growth at each visit, recording length, weight, weigh/length data on standard NCHS growth charts appropriate for sex and age of infant. Counsel according to need per *Growth Chart Interpretations* see Part II Solid Foods on reverse side.

Guide for Counseling on the MILK FEEDING

No - Infant not getting enough breastmilk. Ask why, continue the screening tool to determine feeding practices. Counsel or refer as needed.

BREAST FED

Feed on demand. If inadequate growth check for: at least 3 - 5 wet diapers/day, correct position of child, inadequate suck, and home environment. Give breastfeeding support and technique help.

Encourage	Discourage
Adequate emptying of the breasts. (app. 15 min/breast)	Frequent bottle feedings.
Expressed milk for bottle feedings.	Smoking, alcohol, and drugs by mother.
Adequate diet and rest for mother.	Medications except under the supervision of a physician.

BOTTLE FED

Iron fortified formula is the preferred formula for infants under one year. Stress correct dilution of formula and mixing method. Varies with formula.
Ready-to-feed: no dilution necessary.
Concentrated: dilute 1:1 with water.
Powdered: follow specific directions on container.

Encourage	Discourage
Iron fortified formula.	Overfeeding. Propped bottle.
Holding infant while feeding.	Solid foods added to the bottle.
Watching infant for clues of satisfaction to prevent overfeeding. Feed amount of formula infant consumes without urging.	Cow milk under 1 year old.
	Low fat & nonfat milk under 2 years.
	Goat milk. Raw milk.

Amount of FORMULA & MILK

Consult length, weight, and weight/length growth patterns when assessing adequacy of milk intake. Infants will vary greatly in milk needs, but should follow his/her normal growth curve.

FORMULA QUANTITIES* - A General Guide

MONTHS:	B - 1	2 - 4	5 - 7**	8 - 10	11 - 12
OUNCES:	17 - 27	24 - 37	30 - 36	24 - 30	20 - 24

*These quantities are based on the average calorie requirements for full term male and female infants between the 25th and 75th percentiles. **When solids are introduced between 4-7 months formula/milk quantity will gradually decrease.

Guide for Counseling OTHER FLUIDS Intake

WATER

Frequency of water intake will depend on: climate, foods consumed, bowel movements, and age. If water safety is questionable, water boiled 5 minutes or bottled water is recommended.

Encourage	Discourage
Plain, unsweetened water.	All sweeteners added to water, especially honey due to potential threat of botulism.
Water for symptoms of constipation.	
Extra water during hot weather.	
Sips of water from cup when ready	

JUICE

Introduce at about 7 months by cup.
Juice quantity should not exceed 4 oz per day.
Possible intolerance, especially citrus juice.
Composition of regular juice and commercial baby juice is the same, regular juice more economical.

Encourage	Discourage
Juice by cup only	Juice in bottle, potential dental caries.
Begin with diluted juice in small quantities, then small amounts of regular juice to 4 oz per day.	Early introduction of juice may lead to allergy due to immature GI tract. Excessive juice may lead to depressed growth if replacing more nutrient dense foods.
Sips during regular feeding.	

OTHER LIQUID

Breast milk or formula is the primary infant food for the first 6 months. Other liquids should be limited to plain water, adding juice by cup about 7 months. Infants consuming liquids other than formula may be receiving too few calories for adequate growth. Other liquids are not nutritionally necessary and often replace better quality foods. Sweetened drinks at an early age may begin a life long desire for sweet foods. Avoid caffeine foods (colas, coffee, tea). Counsel on specific cultural practices.

Nutrition Supplements

Breast fed:
Encourage Vitamin D, fluoride, and iron supplements appropriate for age and foods eaten.
Breast and bottle fed: Assess need for supplementation of vitamin D, fluoride, and iron based on most prevalent feeding method.

Bottle fed:
Encourage iron-fortified commercial formula.
If low or non-iron formula is used, encourage appropriate iron supplementation for age.
Fluoride should be given if: infant is (1) on ready-to-feed formula, (2) on concentrated or powdered formula where the fluoride in the water supply is less than 0.3 ppm.

Guide for Counseling on FEEDING PRACTICES

YES responses to questions require action.

1. Encourage use of cup for formula, juice and water starting between 6 and 8 months. Use of cup is important in physical development.
2. Discourage adding any solid foods such as cereals, or sweeteners to bottle. There is no supporting scientific evidence that additional foods help infants sleep through the night. Possible choking if fluid in bottle is too thick and holes in nipple are enlarged.
3. Encourage holding baby during feeding rather than propping bottle to prevent possible dental caries and for parent-infant bonding.
4. Use appropriate nutrition education brochures to help answer current and potential questions on feeding practices.
5. Refer questions of diarrhea and constipation to Physician. Encourage correct dilution ratio of formula as improper dilution is common. Studies in the literature do not support the view that iron fortified formulas and iron supplements cause constipation.
6. See PART II - Solid Food Guide. Encourage introduction of solid foods between 4 and 7 months depending on developmental stage. Feeding solids too early may lead to allergies as gut is not developed, and replacing necessary nutrients from formula or breastmilk.

Nutrition Screening (Continued)

Part II Solid Foods - INFANT NUTRITION ASSESSMENT AND COUNSELING

The amount of solid food needed for an adequate diet depends on the childs age, sex, developmental stage, and eating habits. Encourage caretaker to look for early signs of food satisfaction to avoid overfeeding. *See Growth Chart Interpretations* below. **Common foods that cause CHOKING are printed in CAPS.** CHOKING foods are hard, nondissolving foods, or a size that can easily lodge in the throat. Counsel to avoid these foods until the child is developmentally ready to eat them without choking. (app 3 years)

FOOD GUIDE and Counseling on Solid Foods

GENERAL - Solid foods should be introduced between 4 & 6 months, first in a pureed state and progressing to soft mashed table food between 7 to 12 months depending on the individual infant development. Introduce new foods separately, not in combinations, one at a time about one week apart to check for allergic reactions. (Common reactions include: diarrhea, skin rashes, wheezing, etc.)

CEREAL Introduce single grain cereals between 4 & 6 months mixed with formula or breastmilk. Add mixed grain and wheat cereals at about 8 months. Begin with 1 Tbsp to 1/2 - 3/4 cup/day at 12 mos.	Encourage Cereal by spoon. Waiting until infant attains feeding skill to swallow back.	Discourage Cereal in bottle. Cereals without iron. Presweetened cold cereals.
BREADS & GRAINS Introduce assorted breads and grain products between 7 & 9 months. By 12 months four small servings/day, including cereals.	Encourage Finger foods as: unsalted soda crackers, Cheerios®, tortillas. Pastas and rice mixed with formula or unsalted broth.	Discourage Hard TEETHING BISCUITS, POPCORN, PRETZELS, and similiar hard breads to prevent CHOKING.
VEGETABLES & FRUITS Introduce between 5-7 months. Begin with 1 Tbsp to 1/2 cup/day each at 12 mos. Vegetables and fruits are interchangable nutritionally, are good sources of vitamins A & C, and provide varied texture and taste.	Encourage Variety in soft cooked vegetables & fruits. Foods are first pureed, then mashed, and then table foods. Pieces of cooked vegetables and soft fruits as finger foods when coordination allows.	Discourage Raw or hard potentially CHOKING vegetables and fruits such as GRAPES. Too many new fruits or vegetables added to diet at one time. Too large quantity for child's age.
PROTEIN FOODS Introduce between 6-8 months. Begin 1 tsp/day, continue adding to total of 3 Tbsp/day at 12 mos. Commercial dinner combinations have little meat. Junior foods are convenient but not necessary.	Encourage Meats, chicken, fish finely chopped. Soft meats mixed with pasta/rice. Naturally soft foods such as cooked beans, cheese, tofu. Table foods.	Discourage Whole eggs until 1 year of age. High fat meat foods. SAUSAGE HOT DOGS, MEAT STICKS, & NUTS. Large servings of meats.
OTHER FOODS An infant grows well on basic foods such as: breastmilk, formula, cereals, grains, vegetables, fruits, and simple soft protein foods. Foods in this group are not needed by young children.	Encourage Frequent small feedings. At one year - 3 meals and 3 snacks. Appropriate finger foods. Plain fruits for dessert.	Discourage Food as a reward. Sweets, desserts, high sugar foods. Salt added to food and salty foods. Fried foods. Hot spicy foods.

Guide for Counseling on RELATED FEEDING QUESTIONS

YES responses to questions require action.

1. **Self-feeding:** Encourage self feeding at earliest interest by child. Finger feeding 5-6 months. Spoon feeding by 10 months. Provide appropriate chair for support, spoon to fit hand, feeding dish with sides, small cup and easy to clean area.
2. **Making own baby food:** Refer to brochures and other education materials. Encourage feeding regular family foods pureed, mashed, chopped depending on developmental stage. Discourage prolonged use of special baby foods.
3. **Pica:** Be aware of cultural practices involving Pica and suggest alternates. Encourage food alternatives to non-food items consumed. Discourage the consumption of all non food items..
4. **Diarrhea:** Refer to Physician
5. **Constipation:** Refer to Physician. Refer to Nutritionist for food related problem. Encourage fluids, especially plain water and juice, and age appropriate fruits, vegetables, mixed cereals. Discourage very large quantities of solids introduced or served at one time.
6. **Questions on way baby is eating.** Encourage caretaker to discuss how/when/what infant is eating. Refer to nutrition education materials. Refer to Nutritionist for special feeding problems. Discourage potentially harmful feeding practices. Discourage any type of syringe feeder and other unsuitable utensils.
7. **Allergies:** Refer to Physician. Refer to Nutritionist for information on foods and food products. Encourage introduction of new foods as a single item, not in combinations, about one per week. Discourage early introduction of solid foods.

GROWTH CHART Interpretations - Be sure measurements are accurate and plotted correctly on NCHS growth charts.

PERCENTILES	< 5 REFER	5 - 10 COUNSEL	90 - 95 COUNSEL	≥ 95 REFER
Weight for Age:	Possible malnutrition	At risk malnutrition	Risk of obesity	High risk of obesity
Length for Age:	Possible malnutrition	Assess family height	Normal	Possible hormonal imbalance
Weight for Length:	Possible failure to thrive	Follow up needed	Follow up needed	Risk of obesity

10-90 PERCENTILE is NORMAL. If there is a shift in the growth pattern of two or more channels on the NCHS charts refer for assessment.

State of California—Health and Welfare Agency — Department of Health Services

NUTRITION SCREENING (Infants 0 - 18 months)

DATE _____

Part I - MILK & FLUIDS

Please answer the questions.
Check √ all the milk and liquids your baby drinks.
More than one answer may be checked. ☑ ☑

Child's Name _____
Child's birthdate _____ Age ___ ___
Birth weight _____ Premature? ☐ Yes ☐ No
Sex: ☐ M ☐ F

FOR OFFICE USE ONLY
Wt _____ Lt _____
wt/lt percentile _____
See MILK GUIDE
COMMENTS & ACTION TAKEN

MILK FEEDING

BREAST FED AND/OR BOTTLE FED

Is your baby breast fed? ☐ Yes ☐ No
Do you think your baby is getting enough breast milk? ☐ Yes ☐ No
If your baby takes a bottle, is it
☐ breast milk ☐ formula ☐ other (what?)_____
Check the kind of formula your baby drinks.
☐ S.M.A.® ☐ Enfamil® ☐ Similac®
☐ Soylac® ☐ Isomil® ☐ Prosobee®
☐ Canned milk ☐ Goat milk ☐ other _____
Is the formula:
☐ ready to feed ☐ concentrated ☐ powdered
How much water do you mix with the formula? _____
Is the formula:
☐ with iron ☐ low iron or no iron ☐ not sure

COW'S MILK

What kind of cow's milk does your baby drink?
☐ regular whole milk ☐ low-fat (2%) ☐ nor-fat ☐ raw milk
Is the cow's milk given:
☐ in a baby bottle ☐ in a cup ☐ on cereal ☐ in cooking

Amount of FORMULA and MILK

How many bottles are fed to your baby during the day and night? _____
How many ounces does your baby drink from each bottle? _____
How much milk does your baby drink from cups during the day? _____

OZ of formula _____
OZ of milk

OTHER FLUIDS

WATER

How often does your baby drink water?
☐ rarely/never ☐ once a day ☐ two or more times a day
If your baby drinks water, is the water?
☐ plain water from the tap ☐ bottled ☐ sweetened
Sweeteners used:
☐ Karo syrup® ☐ honey ☐ sugar ☐ other?_____

JUICE

How often does your baby drink juice?
☐ rarely/never ☐ once a day ☐ two or more times a day
Which juices does your baby drink?
☐ apple ☐ prune ☐ orange ☐ mixed ☐ other?_____
How is the juice fed? ☐ in a bottle ☐ in a cup

OTHER LIQUIDS

How often does your baby have other liquids?
☐ rarely/never ☐ once a day ☐ two or more times a day
Baby drinks:
☐ Tang® ☐ soda pop ☐ Kool-aid® ☐ lemonade ☐ Jello®-water
☐ punch ☐ Hi-C® ☐ rice-water ☐ tea/coffee ☐ other?_____

☐ WIC referral made
• Suggested topics
PAMPHLETS given:
☐ Breastfeeding
☐ Mixing formula
☐ Nursing bottlemouth
☐ Introducing first foods
☐ No honey first year
☐ _____

Is your child enrolled in the WIC Program? ☐ Yes ☐ No Do you want a WIC referral? ☐ Yes ☐ No
Check the vitamins and minerals your baby takes.
☐ None ☐ Vitamins ☐ Iron ☐ Fluoride ☐ Vitamins plus Iron ☐ Vitamins plus Fluoride

FEEDING PRACTICES

1. If your baby does not drink from a cup, at what age will you start? ____ months
2. Do you add cereal or other foods to the bottle? . . . . . ☐ Yes ☐ No
3. Does your baby usually take a bottle to bed? . . . . . ☐ Yes ☐ No
4. Do you have any questions about breast or bottle feeding? . . . . ☐ Yes ☐ No
5. Do you have questions on milk feeding and diarrhea or constipation? . . ☐ Yes ☐ No
6. Is your child eating solid foods? . . . . . ☐ Yes ☐ No

If your baby is eating solid foods, please continue to PART II (over)

DHS 4035 (8/88)

State of California—Health and Welfare Agency | Department of Health Services

NUTRITION SCREENING (Infants 0 - 18 months)

Part II - SOLID FOODS

Please answer the questions.
Check √ all the foods your baby eats.
More than one answer may be checked. ☑ ☑

CEREAL

Check all the kinds of cereal your baby eats.
- ☐ baby rice, oat, or barley cereal
- ☐ baby mixed grain or wheat
- ☐ baby cereal with fruit or vegetables
- ☐ "natural" baby cereals
- ☐ cold cereals (regular adult)
- ☐ hot cereals (regular adult)

How often does your baby eat cereals?
☐ less than once a day ☐ once a day ☐ two or more times a day

BREADS and GRAINS

Check all the grains and breads your baby eats.
- ☐ rice ☐ noodles ☐ spaghetti
- ☐ tortillas ☐ bread ☐ toast ☐ crackers
- ☐ PRETZELS ☐ POPCORN ☐ TEETHING BISCUITS
- ☐ Cheerios® ☐ other - what? _____

How often does your baby eat breads and grains?
☐ less than once a day ☐ once a day ☐ two or more times a day

VEGETABLES and FRUIT

Are the vegetables and fruits your baby eats.
- ☐ strained or pureed ☐ chopped or mashed
- ☐ whole canned or cooked pieces ☐ RAW PIECES

How often does your baby eat vegetables and fruits?
☐ less than once a day ☐ once a day ☐ two or more times a day

PROTEIN FOODS
[meats, chicken, fish, tofu, beans, cheese, eggs]

Check all the kinds of protein foods your baby eats.
- ☐ strained meats ☐ junior meats ☐ vegetable/meat dinners
- ☐ meats from table ☐ fish ☐ beans
- ☐ whole eggs ☐ egg yolks ☐ tofu
- ☐ cottage cheese ☐ cheese ☐ plain yogurt
- ☐ MEAT STICKS ☐ HOT DOGS ☐ NUTS
- ☐ other - what? _____

How often does your baby eat protein foods?
☐ less than once a day ☐ once a day ☐ two or more times a day

OTHER FOODS

Check all the other foods your baby eats.
- ☐ pudding/custard ☐ baby desserts ☐ Jello® ☐ ice cream
- ☐ flavored yogurt ☐ chocolates ☐ cake ☐ cookies
- ☐ MARSHMALLOWS ☐ HARD CANDIES
- ☐ SAUSAGES ☐ bacon ☐ fried foods
- ☐ CHIPS ☐ french fries ☐ RAISINS

How often does your baby eat these foods?
☐ less than once a day ☐ once a day ☐ two or more times a day

List other foods your baby eats or drinks. _____

FOR OFFICE USE ONLY

See Solid Foods Guide

COMMENTS & ACTION TAKEN

RELATED QUESTIONS

1. Does your baby try to feed himself or herself?
   ☐ No ☐ Yes: ☐ using fingers ☐ using spoon
2. Are you interested in making your own baby food? . . . . . ☐ Yes ☐ No
3. Does your baby eat dirt or other non-food things? . . . . . ☐ Yes ☐ No
4. Does your baby often have diarrhea? . . . . . ☐ Yes ☐ No
5. Is your baby often constipated? . . . . . ☐ Yes ☐ No
6. Do you have any questions about how or what your baby is eating? . . . . ☐ Yes ☐ No
7. Is your baby allergic to any foods? . . . . . ☐ Yes ☐ No
   If yes, which foods? _____

Suggested topics & PAMPHLETS given:
- ☐ Food in the first year
- ☐ Introducing solid foods
- ☐ Making baby food
- ☐ Constipation
- ☐ Iron rich foods
- ☐ CHOKING FOODS
- ☐ _____

Common foods that cause CHOKING are printed in CAPS

DHS 4035 (8/88)

100

Instructions for Nutrition Screening (DHS 4036 Series)

Forms 4036 and 4036A compile on one page all data related to the assessment of the nutritional status of the patient and identify those persons needing referral or follow up or both.

These forms are designed for use in either a clinic or physician's office by a nonnutritionist professional or a paraprofessional. Specifically, these forms are planned to:

- Screen for questionable nutritional status.
- Determine whether the type and frequency of foods consumed are likely to be adequate to supply the major nutrients: protein, iron, calcium, vitamins A, C, D, and the B group. The foods included are those most frequently consumed according to food consumption studies; therefore, it should be valid for screening the diets of most patients.
- Identify inappropriate food habits and feeding practices.
- Identify patients in need of further dietary assessment.
- Identify patients who should be referred for diagnosis and treatment.
- Become a permanent part of the patient's record.

Sections 1 and 2 of Form 4036 will give an estimate of the adequacy of the diet by determining how frequently the patient eats foods which contribute significant amounts of nutrients. Section 3 contains questions which elicit information important for evaluating dietary habits and for providing nutrition education.

The left-hand column on the reverse sides of both forms contains instructions for evaluating the dietary intake and for giving nutrition education based on the responses to the questions. The right-hand column contains the recommended referral criteria based on the patient's height and weight measurements, the hemoglobin or hematocrit levels, and the dietary information. Space is provided for notes and for recording the plan for future action.

Directions for completing forms 4036 and 4036A follow:

1. Enter the patient's name and age and the date.
2. *Review the directions with the person who will complete the forms.*

   Sections 1, 2, and 3 on Form 4036 and sections A and B on Form 4036A are to be completed by the patient, parent, or guardian with assistance of the interviewer when necessary.
3. Review the forms to ensure that they have been completed correctly.
4. Provide nutrition education to the patient, parent, or guardian based on the adequacy of the diet, the hematocrit or hemoglobin level, and the growth of the child.
5. Note the need for further assessment or counseling, as well as for a referral to another agency on the forms.

DHS 4036 Inst. (7/87)

Nutrition Screening (Continued)

Name of Child _____

NUTRITION SCREENING (1–10 YEARS)

1. CIRCLE ALL THE FOODS THIS CHILD EATS OR DRINKS

2. NEXT, CIRCLE THE BEST ANSWER

1. This child eats some of these foods
   a) less than 3 times a day.
   b) 3 to 4 times a day.
   c) 5 or more times a day.

2. This child eats some of these foods
   a) less than 2 times a day.
   b) 2 or more times a day.

3. This child eats some of these foods
   a) less than 3 times a day.
   b) 3 to 4 times a day.
   c) 5 or more times a day.

4. This child eats some of these foods
   a) less than once a day.
   b) 1 or more times a day.

5. This child eats some of these foods
   a) less than 3 times a *week*.
   b) 3 or more times a *week*.

6. This child eats some of these foods
   a) less than 2 times a day.
   b) 2 or more times a day.

7. This child eats some of these foods
   b) 2 to 3 times a week.
   c) 1 or more times a day.

3. ANSWER THESE QUESTIONS.

1. Is this child allergic to any foods? ☐ Yes ☐ No
   If yes, which ones? _____
2. Does this child drink colas, sodas, tea, coffee, or chocolate two or more times a day? ☐ Yes ☐ No
3. Does this child drink from a baby bottle? ☐ Yes ☐ No
4. Does this child eat dirt, clay, paint chips, ice, refrigerator frost, cornstarch or laundry starch, school paste, or pencils? ☐ Yes ☐ No
5. Does this child have diarrhea or constipation often? ☐ Yes ☐ No
6. Do you ever run out of food to feed the child or family? ☐ Yes ☐ No
7. Does this child skip breakfast almost every day? ☐ Yes ☐ No
8. Does this child live in a home without a working stove or refrigerator or running water? ☐ Yes ☐ No
9. Are you unhappy with now this child eats? ☐ Yes ☐ No
10. Does this child take: Vitamins? ☐ Yes ☐ No
    OR iron? ☐ Yes ☐ No
    OR fluoride? ☐ Yes ☐ No

NAME OF CHILD _____ AGE _____ DATE _____

Nutrition Screening (Continued)

DIET EVALUATION AND COUNSELING

SECTION 1 – FOOD GROUPS

Food Groups 1–6 include foods which provide significant amounts of specific nutrients. Group 7 includes foods which should be discouraged as they are high in calories from sugar and fat, frequently high in salt, and contribute to tooth decay.

FOOD GROUP	MAJOR NUTRIENT(S) AND COMMENTS
1	Calcium, Protein, Riboflavin
2	Protein, Iron, Thiamine, Niacin
3	Carbohydrates, Calories, B vitamins and Iron
4	Vitamin C
5	Vitamin A
6	Fiber, small amounts of vitamins A and C, and adds variety.
7	High in Sugar, Fat, Salt, and are cariogenic

SECTION 2 – INTERPRETATION OF RESULTS

"a" responses indicate possible underconsumption from Food Groups 1–6. Counsel to offer more foods from these groups.

"b" responses indicate acceptable consumption from Food Groups 1–7.

"c" responses indicate possible overconsumption for the Food Groups 1–7. Encourage variety in diet, especially from groups 1–6 with "a" responses.

SECTION 3 – GUIDE FOR COUNSELING

Nutrition education materials to use in counseling are available from the CHDP Program.

1. If YES, investigate need for specific help, especially if milk wheat, or variety of foods are involved.
2. If YES, counsel to limit intake of these caffeinated beverages.
3. If YES, investigate how frequently and for what reasons. Children should usually be fully weaned by 18 months of age. Counsel for nursing bottle mouth if needed.
4. If YES, determine type, frequency, and amount. Discourage intake of these items. May require referral to nutritionist or other designated medical authority for dietary evaluation and/or for determination of blood lead level.
5. If diarrhea, refer to physician for evaluation. If constipation, encourage increased consumption of food in Groups 4, 5, 6, and whole grains in Group 3.
6. If YES, refer for food stamps, WIC, emergency, or other food assistance.
7. If YES, encourage intake of 3 or more foods, 1 from each of Groups 3, 4, and 1 or 2 in morning to provide energy until the midday meal.
8. If YES, recommend adaptable food choices and seek Social Services Follow-up.
9. If YES, ask reason and counsel. If response indicates acceptable consumption from food Groups and growth is adequate, reassure patient.
10. Determine if dosage(s) is/are appropriate for age. Adequate intake of fluoridated water or fluoride supplement is recommended until the age of 14.

NUTRITION ASSESSMENT AND COUNSELING

The following conditions require education and may require referral for diagnosis, treatment, and/or follow-up.

INADEQUATE DIET

☐ Counsel at time of assessment if one food group needs improvement.

☐ Refer to nutritionist or other designated medical authority if 2 or more groups need improvement.

OVERWEIGHT

☐ Above 95th percentile wt/ht on NCHS, refer to nutritionist or other designated medical authority.

☐ 75th to 94th percentile, give supportive counseling to promote an adequate diet, food practices, and activity conducive to normalization of weight. Monitor weight.

UNDERWEIGHT

☐ Under 5th percentile wt/ht on NCHS, refer to nutritionist or other designated medical authority.

SHORT STATURE FOR AGE

☐ Under 5th percentile, refer to nutritionist or other designated medical authority for assessment of family background and possible referral to endocrine clinic.

GROWTH INADEQUATE

☐ Failure to gain weight or maintain percentile level for ht/age, refer to nutritionist or designated medical professional.

ANEMIA

☐ Hct under 34% ☐ Hgb under 11 gm.

Counsel to increase intake of high iron foods such as meats, dried beans, fortified cereals, and leafy greens. A vitamin C source at each meal increases iron absorption.

☐ Hct under 30% ☐ Hgb under 10 gm.
Refer to designated medical authority.

☐ DENTAL CARIES

Counsel to decrease intake of cariogenic foods listed in Group 7. Refer to nutritionist or other designated medical authority if total more than 6.

☐ FOOD ALLERGIES/INTOLERANCES

If present and diet is inadequate, refer to nutritionist or designated medical authority for in-depth counseling.

FAMILY HISTORY OF:

☐ Heart Disease

☐ Diabetes

☐ Hypertension

If any of these conditions exist and the child is at or above 75 percentile weight for height, refer to nutritionist or designated medical authority.

NOTES AND PLANS

Evaluator Signature: _____

Adapted from *Nutrition Screening (1–10 Yrs.):* Public Health Nutrition Program, County of Los Angeles, Department of Health Services H2294, and; San Bernardino County Department of Public Health, Child and Adolescent Health Program (CHDP).

DHS 4036 (2/88)

Nutrition Screening (Continued)

State of California—Health and Welfare Agency | Department of Health Services

NUTRITION SCREENING
(11 – 20 Years)

SECTION A

This questionnaire gives us an idea how well you meet your food needs. Check *ONE* column that best describes how often you eat each food listed below. Check only *ONE* column for each food. Include all meals and snacks eaten at home or away from home (school breakfast or lunch, restaurants, etc.).

For example, if you usually eat a food four times a day (bread for instance), place a check in the column headed "MORE"; if you usually eat a food about two times a week, place a check in the column headed "WEEKLY 1–2"; if you seldom or never eat a food, put a check in the column headed "0".

	FOODS	DAILY 4	DAILY 8	DAILY 12	DAILY 16 More	WEEKLY 0	WEEKLY 1–2	WEEKLY 3–4	OFFICE USE
1	MILK (any kind)								
	CHEESE (except cream or cottage)								
	YOGURT, ICE CREAM								
	COTTAGE CHEESE								
									(16)
2	MEAT & POULTRY								
	FISH								
	EGGS								
	BEANS (not green)								
	PEANUT BUTTER or NUTS								
	TOFU								
									(8)
3	BREAD OR CEREAL (whole grain)								
	BREAD OR CEREAL (white/refined)								
	TORTILLA								
	CRACKERS								
	RICE								
	NOODLES, PASTA								
									(16)
4	ORANGE (or juice)								
	GRAPEFRUIT (or juice)								
	TOMATO (or juice)								
	CABBAGE								
	BROCCOLI								
	MELON								
									(4)

	FOODS	DAILY 4	DAILY 8	DAILY 12	DAILY 16 More	WEEKLY 0	WEEKLY 1–2	WEEKLY 3–4	OFFICE USE
5	DARK LEAFY GREENS (Spinach, romaine lettuce, mustard greens, etc.)								
	CARROTS (cooked)								
	SWEET POTATOES								
	APRICOTS								
	SQUASH (deep yellow)								
									(4)
6	APPLES								
	BANANAS								
	PEARS								
	PEACHES								
	CORN								
	PEAS								
	GREEN BEANS								
	POTATOES (white)								
	LETTUCE								
									(8)
7	CANDY								
	DONUTS, CAKE, PIE, or COOKIES								
	CHIPS, SALTY SNACKS								
	POPSICLES								
	SODA POP								
	TANG, HI-C, KOOLAID								
	SUGAR-COATED CEREALS								
	BEER, WINE, LIQUOR								
									(0)

SECTION B – Answer the following questions:

1. How often do you usually eat each day? Number of meals each day _____ Number of snacks each day _____		
2. Do you usually eat breakfast?	☐ Yes ☐ No	2
3. Are you allergic to any foods? Which ones?	☐ Yes ☐ No	3
4. Do you drink caffein-containing drinks such as Coke, Pepsi, iced tea, tea, or coffee two or more times each day?	☐ Yes ☐ No	4
5. Do you take a nutrition supplement (vitamins, minerals, protein, etc.)? If yes, what?	☐ Yes ☐ No	5
6. Do you have any questions about nutrition or food?	☐ Yes ☐ No	6
7. Do you have any questions about what to eat for sports?	☐ Yes ☐ No	7
8. Do you think you should gain weight?	☐ Yes ☐ No	8
9. Do you think you should lose weight?	☐ Yes ☐ No	9
10. Do you try to control your weight? If yes, circle how. Diet, Exercise, Fasting, Other	☐ Yes ☐ No	10
11. Do you usually salt your food before you taste it?	☐ Yes ☐ No	11
12. Do you eat fried foods or at fast food outlets often?	☐ Yes ☐ No	12

Screener: **See reverse side.**

NUTRITION SCREENING (11–20 YRS.)	Patient's Name	Date	Age	Record Number

DHS 4036A (3/85)

Nutrition Screening (Continued)

DIET EVALUATION AND COUNSELING

SECTION A – Scoring Instructions

For each food eaten "1 or 2 x per wk," give 1 point.

For each food eaten "3–4 x per wk," give 2 points.

For foods eaten daily, give 4 points for each serving (i.e., 2 x per day = 8 points).

ENTER SEPARATELY THE TOTAL POINTS FOR EACH GROUP IN COLUMN HEADED "OFFICE USE." When any group has less than its needed points, counsel to improve diet. Encourage foods in deficient group(s). Stress variety.

Food Groups	Points Needed Boys	Girls	Major Nutrient(s) and Comments
1.	16	16	Calcium, Protein
2.	8	8	Protein, Iron
3.	20	16	Carbohydrates, calories, B Vitamins, and Iron
4.	4	4	Vitamin C
5.	4	4	Vitamin A
6.	8	8	Fiber, variety, and contribution toward intake of Vitamins A and C.
7.	0	0	Add total; if more than 12 points or 3 foods per day, counsel to limit these cariogenic foods and choose meals and snacks from other groups.

SECTION B – Guide for Counseling

Selected patient nutrition education material should be used when counseling.

1.–2. Many teenagers get adequate nutrient intake from snacks. Encourage snacks from groups 1–6 and a morning meal which contains foods from group 1 or 2, 3, and 4.

3. If YES, investigate need for assistance especially if milk, wheat, citrus, corn, or a large variety of foods are involved. Refer to nutritionist.

4. If YES, counsel to limit intake of these caffeinated beverages.

5. Determine if dosage(s) is/are appropriate for age. When diet is adequate, vitamins and/or iron supplements are not usually needed. Adequate intake of fluoridated water or fluoride supplement is recommended until the age of 14.

6.–7. Answer questions or refer to nutritionist.

8.–10. Many adolescents are overly concerned about their weight. They need reassurance that eating nutritious foods and getting regular exercise and sleep will help them through the growth spurt. Showing them where they are on the NCHS Growth Charts can be helpful. Refer to nutritionist when evidence of anorexia or bulimia are present.

11. If using salt shaker at every meal, discourage it. Sodium is present naturally in foods to meet daily needs. Excess salt intake may contribute to high blood pressure.

12. If YES, discourage because of high fat content which contributes to overweight and may contribute to health problems later in life.

Adapted from *Nutritional Screening (1–10 Yrs.)* PH Nutrition Program, County of Los Angeles, Department of Health Services.

NUTRITION ASSESSMENT AND COUNSELING

The following conditions require education and may require referral for diagnosis, treatment, and/or follow-up.

INADEQUATE DIET

Two or more food groups have less than needed points or group 7 is excessive. Refer to nutritionist.

BODY SIZE

Factors to be considered in assessment of body size are:

- development of sex characteristics
- height-for-age percentile
- weight-for-age percentile
- appearance

All youngsters need counseling about the importance of good food and exercise habits during this growth period.

PRE-PUBESCENCE, use the National Center for Health Statistics' (NCHS) Weight for Height growth charts for girls up to 10 years and boys up to 11½ years.

- 95th percentile and above, obesity, refer for further assessment and treatment.
- 5th percentile and below, underweight, refer for further assessment and treatment.

DURING PUBESCENCE (the period of rapid growth and maturing sexual characteristics) the onset and length of this period vary greatly. The onset usually is between 8 and 13 years in girls and 10–14 years in boys but may be later.

- If the youngster appears moderately overweight give general counseling on food and exercise habits. The more mature individuals should be followed to see that obesity does not develop.
- If the youngster appears severely overweight or underweight, or if the height-for-age and weight-for-age percentiles vary markedly, refer for evaluation.*

When the **GROWTH SPURT** is completed:

- If the youngster appears moderately or severely overweight or underweight, or if the height-for-age and weight-for-age percentiles vary markedly, refer for evaluation.*

SHORT STATURE FOR AGE

If there is a decrease in height/age percentile level or the youngster falls below 5th percentile height/age, refer to nutritionist. If short and fat refer to endocrinologist.

ANEMIA

	HEMOGLOBIN (gm)	HEMATOCRIT %
Age 11–14	Below 12.0	Below 37
Age 14+ male/ female	Below 13.0 Below 12.0	Below 41 Below 37

Counsel to increase intake of high iron foods such as iron fortified cereals, dried beans, meats, and leafy greens. A vitamin C source or meat at each meal increases iron absorption.

DENTAL CARIES

Counsel to limit intake of cariogenic foods listed in group 7. Refer to nutritionist if total more than 24 points or 6 times per day.

FOOD ALLERGIES/INTOLERANCES

If present and diet is inadequate, counsel on maintenance of nutritional adequacy. Refer to nutritionist or physician for in-depth counseling.

FAMILY HISTORY OF:

☐ Heart Disease ☐ Diabetes ☐ Hypertension

If any of these conditions exist and the child is overweight, counsel for normalization of weight. May also counsel for risk reduction. Refer to physician for follow-up.

Notes and Plan

*More precise diagnostic criteria can be found in Mellin, L., *Shapedown: Weight Management Program for Adolescents*, Balboa Publishing Company, 1983.

Ostomy Care: Emptying or Changing the Ostomy Pouch

An ostomy is a surgically made opening in the abdominal wall. This may include colostomy (colon), ileostomy (ileum), or ileal conduits (ureters).

I. Personnel Involved

A. School nurse
B. Designated school personnel under direct or indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. Emptying an ostomy pouch may need to be done at school.
B. A change of an ostomy pouch at school is usually needed only because of leakage.
C. An ostomy pouch remains secure from one to seven days.
D. Irrigation, a procedure used to stimulate evacuation of the bowel, shall be done at home.

III. Guidelines for Emptying an Ostomy Pouch

A. Purpose
To prevent premature leakage of the ostomy bag
B. Equipment Needed
1. Toilet or other container to empty the contents of the pouch
2. Washcloth, soap, and water

Emptying an Ostomy Pouch—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. To empty a pouch with a clamp or rubber band, remove the clamp or rubber band. After the contents have been emptied, wipe the end of the bag free from residue with a washcloth or toilet paper and replace the clamp or rubber band. Wash hands with soap and water when finished.	Different kinds of ostomy pouches are used for children. In general, they are either one-piece or two-piece systems with either an open or a closed end. Open-ended pouches have a closure at the end that can be opened. A clamp, rubber band, or spout is used to close the bag.	
2. To empty a pouch with a spout, turn the spout to the on position (open) to allow the contents to empty into a container. When the pouch is empty, return the spout to the closed position. Wash hands with soap and water when this step has been completed.	These pouches are usually found on children with urinary diversions.	

Emptying an Ostomy Pouch—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
3. To empty a pouch with a closed end, first be certain that the pouch is a two-piece pouch. After locating this connection, disconnect the pouch from the skin barrier, empty the pouch, and reconnect the pouch to the skin barrier. Wash hands with soap and water when this step has been completed.	You can determine this by locating a ribbed plastic seal. This seal prevents liquid from escaping at the skin level where the pouch connects to a skin barrier attached to the skin. Be certain that the connection is secure.	

IV. Guidelines for Changing an Ostomy Pouch at School

A. Purpose
   1. To control leakage
   2. To protect and inspect skin
   3. To control odor
   4. To provide comfort and security

B. Principles for Changing a Pouch
   Parents should provide equipment and instructions. Many types of products and different ways to use them exist.
   1. Equipment
      a. Materials to cleanse the skin, such as cotton balls, tissues, toilet paper, washcloths, towels, and premoistened towelettes
      b. Pouch
      c. Skin barrier(s)
      d. Pouch closure
      e. Tape or belt or both
      f. Equipment for cleansing or disposing of used pouches
      g. Additional adhesives, such as disks, cements, or sprays
   2. Pattern
      a. The parent should provide pouches and barriers that are cut to the size of the child's stoma.
      b. The skin barrier should hug the stoma, not ride up on it.
      c. The sticky side of the skin barrier is applied to the skin.
      d. The hole in the pouch is cut 1/8 to 1/4 inch (.32 to .64 cm) larger than the hole in the skin barrier if the skin barrier is a piece separate from the pouch. Paper from the pouch can cut the stoma. The edges should be smooth.

Changing an Ostomy Pouch at School—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Assemble equipment in an appropriate private location. 2. Put the pupil in a sitting or prone position. 3. Wash hands thoroughly.		

Changing an Ostomy Pouch at School—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
4. Remove the ostomy pouch.	Gently peel the pouch away from the skin. An adhesive solvent may be used if provided by the parent.	
5. Place absorbent material over the stoma to absorb drainage.	Protecting the skin from irritating drainage is important, especially if the stoma is an ileostomy stoma.	
6. Empty the ostomy pouch into the toilet.		
7. Save the reusable pouch or discard the disposable pouch.	The parent's instructions should state whether supplies are reusable or disposable. Rinse and store reusable equipment in the appropriate container. Discard the disposable pouch.	
8. Clean the skin around the stoma thoroughly with water. If soap is used, rinse the skin thoroughly. The stoma does not need to be completely cleansed of all fecal material. Do not scrub the stoma; wipe it gently.	A soap residue on the skin can irritate the skin near the stoma. Soap can irritate the stoma. The stoma may bleed slightly during cleansing. Mild bleeding is normal.	
9. Dry the skin thoroughly. Observe the condition of the skin. Report any skin problem to the parent.	Barriers will not stick to damp skin. The skin around the stoma should be free from breakdown.	
10. Prepare the pouch for application.	The skin barrier should be the same size as the stoma. Skin around the stoma that is not covered will become irritated.	
a. Cut the pouch to fit if necessary. Encourage the parent to bring supplies that are precut.		
b. Apply additional adhesive if necessary.	*Note:* When applying skin cements, you *must* apply a thin layer and allow it to become tacky. Failure to allow cement to become semidry will cause skin to break down.	

Changing an Ostomy Pouch at School—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
c. Press the skin barrier.	A secure seal must be achieved between the skin barrier and the appliance to prevent leakage.	
11. If the pouch is open-ended, secure the end of the pouch with a clamp or rubber band.		
12. Put tape on the outer edge of the skin barrier of the pouch in a square shape.	Cut strips of tape 1 inch (2.54 cm) longer than the skin barrier, and apply half of the tape to the flange and half to the skin to seal the skin completely.	
13. Attach a belt if used.		
14. Wash hands thoroughly.		
15. Record the procedure on the SPHCS log.		

Oxygen Administration

Oxygen is given to relieve hypoxia (a deficiency of oxygen reaching the tissues of the body), either local or generalized.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. A pupil may need continuous or PRN (whenever necessary) treatments at school.*
B. The physician's order must specify:
   1. Flow rate (liters per minute)
   2. Method of administration (mask or nasal cannula)
   3. Specific indications for beginning and ending each treatment
C. Oxygen supports combustion; therefore, danger of fire always exists when oxygen is being used:
   1. Do not permit smoking or open flames in the area.
   2. Remove highly combustible materials.
D. The oxygen cylinder must be secured in an upright position away from heat and in a reasonable proximity to the pupil in all of his or her school activities.
E. This procedure must be authorized by a physician. The service must be reauthorized yearly by the prescribing physician and the parent.

III. Guidelines

A. Purpose
   To reduce hypoxia, either local or generalized
B. Equipment (Parents are responsible for providing and maintaining equipment.)
   1. Oxygen tank on a stand with wheels for portability
   2. Tank with flow meter and pressure gauge that measures the level of oxygen remaining in the tank
   3. Humidifier if ordered
   4. Tubing and mask or cannula
   5. Any other equipment provided and recommended by the manufacturer or vendor
   6. Arrangements for routine maintenance of the oxygen tank

*PRN is from Latin *pro re nata*, "as needed"; "for a special emergency."

Oxygen Administration—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Ascertain whether the pupil has symptoms as described in the physician's orders.		
2. Wash hands with soap and water.	Delete this step if an emergency occurs.	
3. Fill the humidifier, if ordered, with water.		
4. Turn the main valve on and adjust the liter flow according to the manufacturer's directions.	These directions should be written and attached to the tank because they will vary according to each pupil's needs.	
5. Adjust the liter flow to the rate prescribed by the physician.		
6. Place a mask or cannula on the pupil's face.		
7. Continue treatment as prescribed by the physician or until symptoms disappear if this treatment is PRN.	Tubing needs to be cleaned or changed periodically, depending on how frequently treatments are done.	
8. Turn the tank off according to manufacturer's directions. Return the tank to a secure position in the storage area. Check the gauge for the oxygen level.		
9. Record the procedure on the SPHCS log and inform the parent as needed.		

Postural Drainage and Percussion

The medical reviewers do not recommend that postural drainage and percussion be performed at school for the following reasons:

1. Performance of this procedure during school hours is rarely necessary.
2. The length of time needed to perform this procedure prevents the pupil from participating in educational activities.
3. The procedure is too complex to be taught to a lay person within a reasonable time frame.
4. Performance of this procedure by a person without highly developed skills would be at best ineffective and at worst injurious to the pupil.

Caution: Postural drainage and percussion should never be performed without a suction machine immediately available. Many pupils cannot cough and expectorate effectively on their own; therefore, performing postural drainage without a suction machine is hazardous.

Postural drainage is the positioning of the body for drainage to occur from a specific segment of the lungs to the main bronchi.

Percussion assists secretions to flow from the lung segments to the main bronchi, enabling the patient to cough and expectorate more easily. Cupped hands are used with fingers held together in a relaxed position.

I. Personnel Involved

Designated school personnel under direct or indirect supervision by the school nurse

II. General Information

A. Pupils needing postural drainage have pulmonary dysfunction, such as cystic fibrosis, chronic bronchitis, asthma, other pulmonary disorders, muscular dystrophy, cerebral palsy, and so forth.

B. Postural drainage may be performed two to four times daily, depending on the pupil's tolerance and the physician's orders.

C. Additional postural drainage may be indicated when the pupil is congested or is having respiratory distress.

D. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and the parent.

E. Physicians usually modify and abbreviate this procedure. As a result, it then may be provided during the school day.

III. Guidelines

A. Purpose

To maintain maximum lung capacity by assisting pupils who have difficulty raising sputum

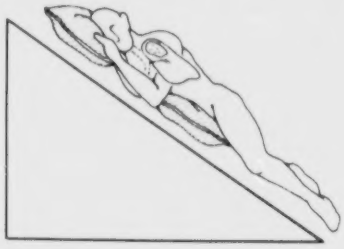
B. Equipment (Parents are responsible for providing and maintaining equipment.)

1. Pillows
2. Tissues
3. Suction machine and accompanying supplies
4. Water to clear catheter
5. Wastebasket (with plastic liner)

Postural Drainage and Percussion—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Assemble the equipment in an appropriate location.		
2. Use the following sequence for percussing each lobe of the lungs:		
a. Place the pupil in an appropriate position.	Ten positions are necessary for percussing all lobes of the lungs. Use cupped hands with moderate pressure to create a hollow sound during percussion. Avoid percussing over the kidneys.	
b. Percuss the lobes for 3 minutes over the appropriate area.		
c. Instruct the pupil to cough into tissue following each percussion. Discard used tissues into a lined wastebasket. Use vibration (applying pressure to the appropriate lobe during coughing).	Initial coughing attempts may not produce sputum. When further positioning and percussion are provided, coughing will become productive. (Use of vibration may break bones when pupils have abnormal bone conditions or are receiving medication, such as steroids.)	
d. Do oral-pharyngeal suctioning if the pupil is unable to clear secretions by coughing.	Refer to "Tracheostomy: Suctioning" on page II-99.	
3. The ten positions for percussing pupils weighing 40 pounds (18 kg) or more are as follows:	See step 4 in this procedure for techniques for percussing pupils under 40 pounds (18 kg).	
Number 1. Position the pupil on stomach with right side of torso and right arm elevated on pillow.	*Position 1.* This one-quarter turn of the body is the correct position for percussing the posterior segment of the right upper lobe–over the right upper scapular area. *Note:* In all positioning, additional pillows may be necessary to obtain the desired elevation; the need for additional pillows depends on the pupil's weight.	

Postural Drainage and Percussion—Procedure (Continued)

Essential steps	Key points and precautions	Child specific
Number 2. Position the pupil on stomach, with left side of torso and left arm elevated on pillow.	 *Position 2*. This one-quarter turn with head and shoulder elevation is the correct position for percussing the posterior segment of the left upper lobe–over upper left scapular area. The left bronchus is more vertical, thus requiring a nearly 45 degree elevation.	
Number 3. Position the pupil flat on back, with pillows placed under the head and knees.	 *Position 3*. This position is correct for percussing anterior segments of right and left upper lobes–between the clavicle and nipple areas.	
Number 4. Position the pupil on back. Turn hips one-quarter turn to the right. Elevate hips 10 to 12 inches (2.5 to 3 dm) with pillows. Use additional pillows, as needed, to hold hips to the right.	 *Position 4*. This position is correct for percussing the lingular process (left lower part) of left lung–from left armpit to nipple area.	
Number 5. Position the pupil on back. Turn hips one-quarter turn to the left. Elevate hips 10 to 12 inches (2.5 to 3 dm) with pillows. Use additional pillows as needed to hold the hips to the left.	 *Position 5*. This position is correct for percussing the middle lobe of the right lung–from the right armpit to nipple area.	

Postural Drainage and Percussion—Procedure (Continued)

Essential steps	Key points and precautions	Child specific
Number 6. Position the pupil flat on stomach with pillows under the stomach and lower legs and feet.	*Position 6.* This position is correct for percussing apical (top) segments of the right and left lower lobes–over the lower scapular areas.	
Number 7. Position the pupil on back–elevate hips 16 to 18 inches (4 to 4.6 dm) with pillows.	*Position 7.* This position is correct for percussing anterior basal segment of right and left lower lobes–over lower chest area below nipples.	
Number 8. Position pupil on stomach. Elevate hips 16 to 18 inches (4 to 4.6 dm) with pillows.	*Position 8.* This position is correct for percussing posterior basal segments of right and left lower lobes–over lower chest areas (avoid kidneys).	
Number 9. Position pupil on right side. Elevate hips to 16 to 18 inches (4 to 4.6 dm) with pillows.	*Position 9.* This position is correct for percussing lateral basal segment of left lower lobe–over left side from beneath armpit to end of rib cage.	
Number 10. Position pupil on left side. Elevate hips 16 to 18 inches (4 to 4.6 dm) with pillows.	*Position 10.* This position is correct for percussing lateral basal segment of right lower lobe–over right side from beneath armpit to end of the rib cage.	

Postural Drainage and Percussion—Procedure (Continued)

Essential steps	Key points and precautions	Child specific
4. The techniques for percussing pupils under 40 pounds (18 kg) and other pupils in a sitting position are as follows:		
Number 1. Person who does the percussing sits in chair with legs outstretched at a 45 degree angle and with bottom of feet braced against solid, upright object. Place pillow in front of your knees. Place the pupil face down on your lap with his or her chin resting on the pillow.	This position is correct for percussing posterior basal segments of lower lobes–over area from lower scapulae to end of rib cage. *Note:* Young children and infants usually have no upper lobe involvement requiring percussion. Percuss with light pressure.	
Number 2. Seated as before, hold pupil face up on your lap, with his or her head resting on pillow.	This position is correct for percussing anterior segments of lower lobes–over area from below nipple to end of rib cage. *Note:* For babies, be sure that the head is firmly supported in both positions and percuss with light pressure.	
5. After the pupil has percussed and coughed in all ten positions, assist him or her with five breathing techniques.	Percussion assists the pupil in raising sputum from the lung. This time is the best for maximum aeration of the lungs.	
Number 1. Encourage diaphragmatic breathing (breathing with the diaphragm instead of the chest). Repeat about 15 times.	Check for correct breathing by holding hand at upper abdomen and feeling it rise and fall while the chest is still. Encourage diaphragmatic breathing at all times.	
Number 2. Have pupil raise arms over head while breathing in and lower arms while breathing out. Repeat about 15 times.	Maintain breathing pattern while performing this exercise. Encourage this type of breathing in functional activities, such as combing hair, lifting, and so forth.	
Number 3. Have pupil extend arms outward while breathing in and put arms across the chest while breathing out. Repeat about 15 times.	Maintain breathing pattern while performing this exercise. Encourage slow expiration.	
Number 4. Encourage pupil to use prolonged expiration; e.g., pursed-lip breathing. Repeat several times.	This technique assists pupil in emptying the lungs.	

Postural Drainage and Percussion—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
Number 5. Assist pupil in progressive relaxation, using several techniques: a. Imagery (Think of pleasant thoughts such as being at the beach, breathing fresh air, and so forth.) b. Autogenic phrasing (Feel hands getting warm and heavy to promote relaxation, and so forth.) c. Progressive muscular relaxation (Contract right arm, relax right arm, repeat for left arm, and so on.)	This procedure assists pupils to minimize asthmatic attacks or other respiratory distress symptoms. Progressive relaxation is used along with the physician's recommendations.	
6. At the end of each day, close and secure the liner from the wastebasket tightly before disposing of the contents.		
7. Record the procedure on the pupil's SPHCS log and health insert.		

Respiratory Assistance: Inhaler

An inhaler delivers medication directly to the lungs.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as an indirect procedural supervisor

II. General Information

A. The inhaler is used when medication to open or dilate the bronchial tubes must be delivered directly to the lungs.
B. The use of medication and the inhaler requires a physician's written authorization. This service must be reauthorized yearly by the prescribing physician and parent or guardian.

III. Guidelines

A. Purpose

To improve breathing by administering medication directly into the lungs

(To prevent an attack or to control an attack that has begun, asthmatics can use an inhaler before exercising.)

B. Equipment

1. Inhaler with tube (Various brands are available.)
2. Prescribed medication
3. Aerosol chamber or bubble reservoir if prescribed

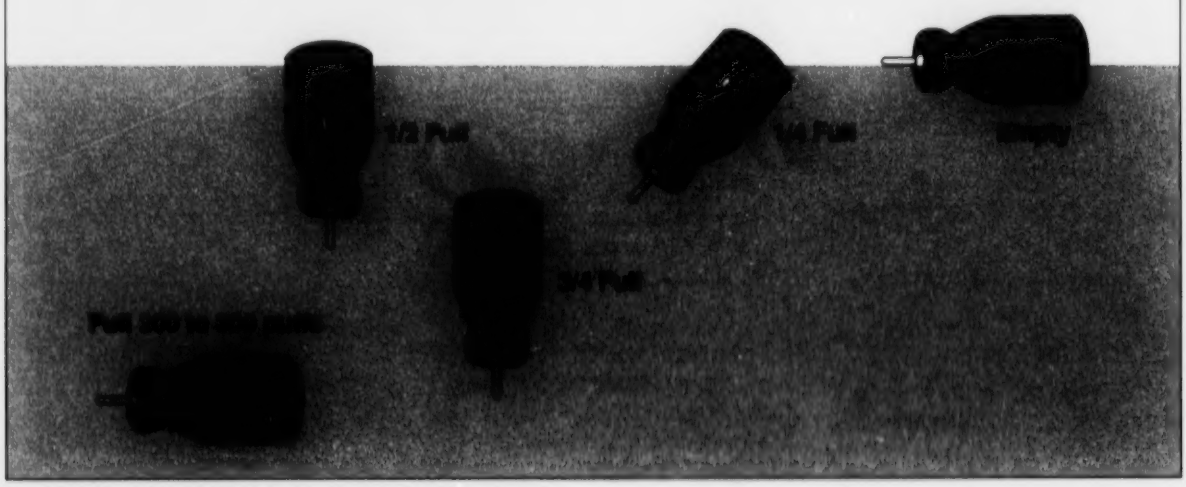
Respiratory Assistance: Inhaler—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need for pupil to use an inhaler at school by reviewing the physician's order.	To get the medication directly to the lungs, the technique with the inhaler must be correct. If the inhaler cannot be used correctly, an aerosol chamber or bubble reservoir may be attached to the inhaler. This method allows the medication to be held until the pupil is ready to breathe in.	
2. Wash hands.		
3. Attach the inhaler to the tube if necessary.	The right amount of medication may not spray out if the inhaler is not shaken well.	
4. Shake the inhaler well.		
5. Have the pupil: a. Hold the inhaler in one hand in an upright position. In the other hand hold the tube attached to the inhaler.	The inhaler will stop spraying if it is held upside down. See the manufacturer's directions for the correct position.	

Respiratory Assistance: Inhaler—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
b. Breathe out to the end of a normal breath. c. Place the tube in the mouth. d. Tilt the head slightly back and start to breathe in *slowly*.	Breathing in too fast makes most of the medicine stick in the mouth and throat rather than being delivered to the lungs.	
6. Spray the inhaler at the *start* of a normal breath.	If sprayed at the end of a breath, the medication will not work as well.	
7. Breathe in as deeply as possible over 2 to 3 seconds.		
8. Take the inhaler out of the mouth and hold the breath 8 to 10 seconds.		
a. Repeat the procedure if another puff is required. b. Record the use of the inhaler and medication on the pupil's medication record.	Wait 5 to 10 minutes between puffs. Do not let the pupil take more puffs than directed by the physician.	
9. Determine the condition of the pupil based on the post-treatment status.	Contact the parent and consult with the physician as needed.	

Note: **Determining whether the inhaler is full or empty is sometimes difficult. To make this assessment, place the inhaler in a clear container filled with water and observe the position of the inhaler. Compare the results with those shown in the picture on this page.**



Respiratory Assistance: Mechanical Nebulizer

A mechanical nebulizer converts a liquid to a fine spray.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as an indirect procedural supervisor

II. General Information

A. A mechanical nebulizer is powered by either oxygen or compressed air that produces a stable aerosol of fluid particles.
B. An ultrasonic nebulizer contains fluid in a chamber that is vibrated rapidly, causing the fluid to break into small particles that are then carried by a flow of compressed air or oxygen to the pupil.
C. This procedure requires a physician's written authorization. This service must be reauthorized yearly by the prescribing physician and the parent.

III. Guidelines

A. Purpose

To improve breathing by the administration of bronchodilators, mucolytics, or other medications directly into the lungs by means of aerosol instillation; and to provide an atmosphere of high humidity to assist the breakup of pulmonary and bronchial secretions and aid the pupil in coughing them up

B. Equipment (Parents are responsible for providing and maintaining equipment.)

1. Air compressor or oxygen
2. Oxygen nipple adapter
3. Connection tubing
4. Mechanical nebulizer manifold or ultrasonic nebulizer with cup and mask
5. Medication or saline solution

Respiratory Assistance: Mechanical Nebulizer—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need for the pupil to use the nebulizer at school by reviewing the physician's orders.		
2. Assess the pupil's respirations.	Establish a baseline for rate, depth, effort, noise, color, restlessness, and level of consciousness.	
3. Monitor the heart rate before and after treatment by taking a pulse when bronchodilators are administered.	Bronchodilators may produce tachycardia, rapid heartbeat, palpitation, dizziness, nausea, and excessive perspiration.	
4. Assemble equipment and medication, as ordered, near the pupil.		
5. Explain the procedure to the pupil.	Use language and demonstration methods that are appropriate for the pupil's level of development because the effectiveness of this therapy depends on the pupil's efforts.	
6. Wash hands.		
7. Place the appropriate amount of medication and saline solution or water in the nebulizer.	Do not exceed the ordered amount.	
8. Place the pupil in a comfortable sitting position.	Expansion of the lungs and movement of the diaphragm are greatest in this position, allowing for maximum treatment of the basilar areas of the lungs.	
9. Have the pupil demonstrate mouth breathing. Have him or her practice if necessary.	Instruct and demonstrate the technique as needed.	
10. Attach the nebulizer hose to the air compressor or to oxygen and turn it on. A fine mist should be visible.	A flow rate from 5 to 6 to 8 to 10 liters per minute will provide a treatment time of about 8 to 10 minutes.	
11. Follow the instructions from the manufacturer when an ultrasonic nebulizer is used.	Instructions vary. See the physician's orders.	

Respiratory Assistance: Mechanical Nebulizer—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
12. Have the pupil place the mouthpiece in his or her mouth if possible.	Use a mask if the pupil cannot use the mouthpiece. When output from the nebulizer appears to have decreased, unplug the device and check the tiny opening for clogging. If the opening is clogged, carefully run a pin through it and rinse it well.	
13. Tell the pupil to breathe in and out through his or her mouth.	Noseclips are sometimes used if the pupil has difficulty breathing only through his or her mouth. (This step is performed under a physician's directions.)	
14. Every 2 minutes, or as ordered, have the pupil take an extra deep breath or two, hold his or her breath briefly; then exhale as slowly as possible. Resume normal breathing until time for the next deep breaths.	This technique allows the medication to remain in the lungs longer and facilitates dispersion of the particles.	
15. Observe the expansion of the pupil's chest.	Deep breaths ensure that the medication is deposited below the oropharynx.	
16. Remove the mouthpiece or mask if a cough occurs during the treatment, and allow the pupil to clear the secretions completely and then continue the treatment.	Turn off the machine when it is not being used.	
17. Give the pupil time to rest during the procedure if needed.		
18. Observe the pupil for any adverse reactions such as wheezing (bronchospasm) and excessive fluid deposition causing suffocation.	Wheezing indicates air turbulence and may result from the irritating effect of the medication on the airway or from inability to expectorate the loosened secretions. Wheezing may also indicate improvement of the air exchange if little air movement occurred previously.	

Respiratory Assistance: Mechanical Nebulizer—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
19. Continue the procedure until all the medication or fluid has been nebulized.	Note the length of time for this process.	
20. Have the pupil take several deep breaths, cough, and spit out the secretion after the treatment.	Demonstrate the procedure if needed.	
21. Wash your hands; have the pupil wash his or her hands.		
22. On the SPHCS log, document the use of the nebulizer, with or without the pupil's having been given medication.	Record the date and time, the name of the medication used, the duration of the treatment, the respiratory rate and effort, the heart rate before and after the student has been treated with bronchodilators, and a description of the secretions expectorated.	

Cleaning and Care of the Nebulizer

Daily thorough cleaning should be done *at home*.

After each treatment:

1. Rinse the nebulizer, mouthpiece, and/or mask under hot running water.
2. Shake off the excess water.
3. Lay these parts on a clean cloth or towel to dry.
4. Cover the nebulizer parts with a cloth or towel.
5. When the parts are dry, store them in a clean plastic bag, the top of which can be sealed. The tubing does not have to be cleaned, but it should be stored in the same bag with the other equipment.

Respiratory Assistance: Peak Flow Meter

A peak flow meter measures the amount of air that can be exhaled from the lungs in a single breath.

I. Personnel Involved

A. School nurse
B. Designated school personnel under indirect supervision
C. School nurse as an indirect procedural supervisor

II. General Information

A. The peak flow meter is useful in the management of the pupil with asthma because this device can detect early changes in the bronchioles.
B. Baseline data for the pupil must be obtained. The pupil's normal peak flow should be recorded so that comparisons can be made.
C. Peak flow results can be used by the physician to determine the plan for treatment and by the school nurse to evaluate the plan for treatment.
D. Peak flow results can be used to assess the pupil's respiratory status.

III. Guidelines

A. Purpose
   1. To improve the ability to predict the onset of and to assess the severity of asthma
   2. To detect the small changes in airflow that occur at the start of an asthma attack
   3. To identify exercise-induced asthma
   4. To monitor the need for or the response to prescribed medication

B. Equipment
   1. Peak flow meter (Various brands are available.)
   2. Mouthpiece (plastic or disposable)

Respiratory Assistance: Peak Flow Meter—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Determine the need for the pupil to use the peak flow meter at school by reviewing the physician's orders.	Some asthmatics may not appear to be wheezing, even though they are in acute distress.	
2. Wash hands.		
3. Place the mouthpiece on the peak flow meter.	Make sure that the pointer is on zero.	
4. Have the pupil stand up.		
5. Have the pupil hold the meter with the vent free. Fingers must not obstruct the slot.	Hold the body of the meter cylinder parallel to the floor.	
6. Have the pupil place the mouthpiece on the tongue with lips around the outside of the mouthpiece.		
7. The pupil must inhale as deeply as possible.		
8. The pupil must blow out as hard and as fast as possible into the mouthpiece. Be sure that the lips form a tight seal.	The pupil's exhaling will cause the marker to move up the meter. Note and record the measurement that registers on the meter.	
9. Replace the marker at zero. Repeat the procedure two more times for a total of three exhalations.	Wait 15 seconds between each try.	
10. Record the best measurement. Compare this reading with the baseline data.	Use comparison data to assess the respiratory status of the pupil. See the "Asthma Care Zone System" on the next page.	
11. Determine the need for medication as authorized by the physician.		
12. Determine the condition of the pupil.	Contact the parent and consult with the physician as needed.	
13. Record the findings from this procedure on the pupil's SPHCS log.		
14. Refer to the manufacturer's guide for cleaning and maintenance of the peak flow meter.		

Asthma Care Zone System

The asthma care zone system is a color system to monitor an asthmatic's breathing. The colors indicate which procedure to perform.

Green Zone (Indicates relative stability)

With reasonable amounts of medicine, children with well-controlled asthma should be maintained within 90 to 100 percent of their best peak flow value.

No change in medicines may be needed at this level.

If the results from a child's tests show proven stability in this zone, tapering certain medicines may be considered.

Yellow Zone (Indicates trouble)

Early signs of an asthma attack are either detected or confirmed by peak flow fluctuations in a range from 50 to 90 percent of normal.

If appropriate changes in medication are made, the child's asthma should be restabilized at the green zone.

At the highest ranges of this zone (70 to 90 percent), wheezing and coughing may not be noticeable either with the use of a stethoscope or an unaided ear. Some children either may not notice any change in breathing or may ignore subtle signs of impending wheezing.

The lowest end of this zone (50 to 70 percent) is associated with obvious clinical signs of asthma. This precrisis zone indicates extreme asthmatic instability, requiring immediate medical attention.

Red Zone (Indicates emergency)

When flow rates fall to or below the 50 percent level, the child faces an almost certain asthmatic crisis.

Immediate and aggressive intervention is critical.

Tracheostomy: Care and Cleaning of Inner Cannula and Stoma

I. Personnel Involved

A. School nurse
B. Designated school personnel under direct or indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. Care and cleaning of the inner cannula and stoma should be done routinely at home unless the pupil's condition necessitates more frequent care that must be provided during the school day:
B. A designated person trained in the care and cleaning of the inner cannula and stoma must be on site whenever a pupil requiring this care is at school.
C. An extra inner cannula must be kept with the pupil.
D. The pupil's program is arranged so that he or she is within easy access to the necessary equipment.
E. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and the parent.

III. Guidelines

A. Purposes
    1. To maintain an airway by keeping the inner cannula open and free of secretion and exudate
    2. To prevent infection
    3. To prevent irritation of tissue around the tracheostomy tube
    4. To maintain an airway when there is:
        a. Labored or interrupted breathing
        b. Excessive discharges or mucus plugs
        c. Restlessness and/or apprehension
        d. Dry, crusty secretions around the tracheostomy tube

B. Equipment (Parents are responsible for providing equipment.)
    1. Paper cups (nonwaxed)
    2. Cotton-tipped applicators
    3. Hydrogen peroxide solution, full strength
    4. Pipe cleaners or plastic drinking straws or both
    5. Gloves (clean, disposable) (They must be sterile if the sterile technique is used.)
    6. Twill tape and tracheal ties
    7. Antimicrobial ointments if ordered by the physician
    8. Sterilized tracheostomy dressing if indicated
    9. Adhesive tape if needed to secure the dressing
    10. Paper bag for disposal of wastes
    11. Suctioning supplies and equipment
    12. Clean scissors if tracheal ties are to be changed
    13. Sterile saline solution or water

Tracheostomy: Care and Cleaning of Inner Cannula and Stoma—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Preparation of the pupil		
a. Explain the procedure to the pupil and ways for him or her to assist.	If the pupil is spastic, restless, agitated, or confused, he or she may need to be restrained during the procedure.	
b. Position the pupil, with the tracheostomy area exposed.	Elevating the head of the bed provides drainage of the cleansing solution on the pupil's chest rather than into the tracheal opening.	
2. Preparation of the equipment		
Assemble supplies and take them to the pupil.		
3. Method		
a. Wash hands.		
b. Set out three paper cups.		
c. Fill one cup with hydrogen peroxide and one with sterile saline solution.	Normal saline solution may be used instead of hydrogen peroxide if indicated.	
d. Place two to four cotton-tipped applicators in the third cup.		
e. Put on gloves.		
f. Remove the soiled gauze dressing.	Removing the soiled dressing reduces the number of contaminates at the area to be cleaned.	
g. Discard the dressing in a paper bag.		
h. Using an applicator moistened with hydrogen peroxide, cleanse the stoma at least 1 inch (2.54 cm) beyond the outer cannula.	Do not wipe over the area more than once with the same applicator. Cleanse the area next to tube first and proceed outward, using a circular motion.	
i. Discard used applicators into a paper bag.		
j. Using a dry applicator, wipe the cleansed area, drying it thoroughly.	Rinsing off hydrogen peroxide is not essential.	
k. Unlock and remove the inner cannula, holding the outer cannula in place.		
l. Place the inner cannula in a paper cup filled with hydrogen peroxide.	Be sure that the cup is filled to cover the inner cannula completely.	

Tracheostomy: Care and Cleaning of Inner Cannula and Stoma—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
m. Soak the inner cannula in peroxide (1 to 5 minutes). *Note:* The sequence of prior steps may be altered if the inner cannula requires a longer time to soak to remove tenacious mucus. Begin with step k, continue through step n, and follow with cleaning the stomal area (steps g through k).	Removes mucus by bubbling action.	
n. Cleanse the inner cannula with pipe cleaners or plastic drinking straws.	Using two pipe cleaners or doubling the end of a pipe cleaner provides more effective cleansing than using one cleaner does.	
o. Pour sterile saline or water into a cup and allow the inner cannula to soak for a brief time.		
p. Remove the cannula from the cup and pour sterile saline solution or water over it until it is thoroughly clean.		
q. Shake out excess moisture; put in a clean paper cup.		
r. Pour out any peroxide and saline solution and discard the paper cup and pipe cleaners.		
s. Take off gloves and discard them.		
t. Suction the outer cannula and airway according to appropriate suctioning procedure if necessary.		
u. Replace the inner cannula and secure it in place.	Replace the inner cannula as soon as possible after cleaning to prevent mucus plugs from forming in the outer cannula.	
v. Determine whether the pupil is ventilating adequately.		
w. Apply antimicrobial ointments if ordered by the prescribing physician.	Indiscriminate use of ointments may increase bacterial growth.	

Tracheostomy: Care and Cleaning of Inner Cannula and Stoma—Procedure (Continued)

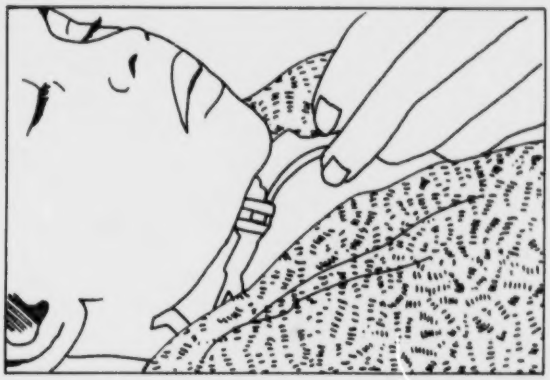
Essential steps	*Key points and precautions*	*Child specific*
x. Apply gauze dressing if needed to help hold the tracheal tube in position or to decrease air leaks.	When secretions are excessive, the dressings must be changed frequently, and the area must be kept dry.	
4. Care of pupil		
a. Check whether the pupil is being adequately ventilated (an ongoing procedure).		
b. Check whether the tracheostomy tube is positioned properly.		
5. Care of equipment		
a. Dispose of all supplies after use.		
b. Wash hands.	A brisk, thorough handwashing with soap and water is the most effective means of preventing the spread of organisms.	
6. Record the procedure on the SPHCS log.		

Tracheostomy: CPR for a Child with a Tracheostomy

The stages for cardiopulmonary resuscitation (CPR) are arousal, airway, breathing, and circulation.

Tracheostomy Breathing

1. Determine whether a pupil is responsive by *gently* shaking his or her shoulder.
2. Call for help from the staff.
3. Position the pupil on his or her back. Be careful of the head and neck. Place the pupil on a firm surface.
4. Open the airway using the chin lift. Remove the inner cannula.

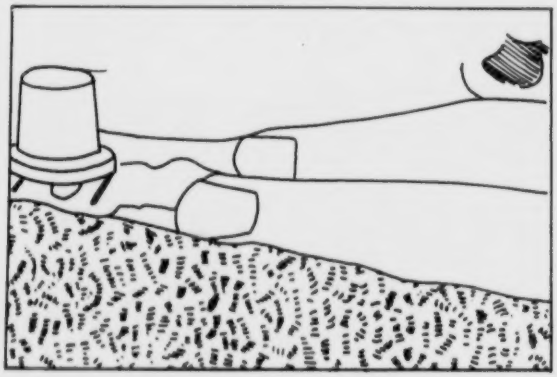


5. Check for breathing; look, listen, and feel.
   a. If the pupil is breathing, keep the airway open and observe the pupil closely.
   b. If the pupil is not breathing, proceed to step 6.
6. Breathe twice into the tracheostomy, using either:
   a. Mouth to tracheostomy or tracheostomy adaptor
   b. Resuscitation (ambu) bag to tracheostomy (Use of the resusitation bag is preferable.)
      (1) Each breath should be 1 to 1 1/2 seconds.
      (2) The chest should rise gently with each breath.

Tracheostomy: CPR for a Child with a Tracheostomy (Continued)

(3) If unable to get breaths in:
- (a) Reposition the head and airway.
- (b) Suction tracheostomy; use saline solution to dilute secretions (the inner cannula has been removed).
- (c) Attempt to breathe again into the tracheostomy.
- (d) Repeat steps (a), (b), and (c) one or more times.
- (e) If you are unable to get air in, remove the outer cannula of the tracheostomy and put in a new set.
- (f) Give two breaths of air into the tracheostomy.

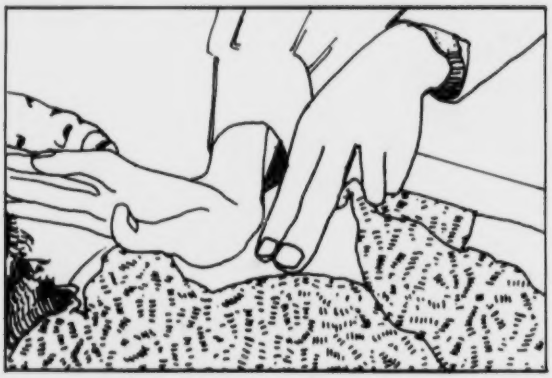
7. Check for pulse. Feel for carotid pulse on the side of the neck nearest to you.
   a. If the pulse is strong (at least one beat per second), maintain an open airway and perform rescue breathing at 15 breaths per minute; recheck the pulse often.
   b. If no pulse, proceed to step 8.



8. Ask the helper to call the Emergency Medical System (911) in most areas. If you are by yourself, call later.

External Cardiac Compressions

9. Begin chest compressions.



a. Use the heel of one hand.
b. Check the landmark by placing the middle finger in the notch where the ribs join the sternum. The area just above the index finger on the sternum is the correct placement.
c. Compress the chest 1 to 1 1/2 inches (2.54 to 3.8 cm).
d. Do chest compressions at the rate of at least 80 to 100 per minute.

Chest Compressions and Mouth-to-Mouth Breathing

10. Do the following for compression and ventilation cycles:
    a. Do the compressions at a ratio of five compressions to one breath.
    b. Pause for ventilation.
    c. Check placement of the hands each time compressions are done.
    d. Do ten cycles.
11. Check for return of breathing and pulse (for 5 seconds).
12. Call the Emergency Medical System (911) if you are alone. Return immediately to the pupil and continue CPR as needed.
    a. Give one breath.
    b. Return to five compressions to one breath.

SPECIAL NOTE

Most children with tracheostomies are not tracheostomy dependent, meaning that they do not depend completely on the tracheostomy tube for their only airway. Some air exchange occurs through the mouth and nose. Therefore, in an emergency situation when a child cannot breathe through the tracheostomy tube, you might want to do mouth-to-mouth resuscitation. Attempts should then be made either to remove the obstruction by suctioning or to change the tracheostomy tube (outer cannula). (See the procedure under "Tracheostomy: Tube Replacement.")

Kun, Sheila; Mary Halvorson; and Patti Liebhauser. *Tracheostomy Home Care for Children*. Los Angeles: Children's Hospital of Los Angeles, 1988.

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Tracheostomy: Suctioning

A tracheostomy is a surgically made opening in the neck (trachea) to allow breathing when the normal pathways are impaired. The opening is held open with a metal or plastic tube, which is tied in place. ***Tracheostomy care may be either an aseptic technique or a clean technique, as specified by the physician.***

I. Personnel Involved

A. School nurse
B. Designated school personnel under direct or indirect supervision
C. School nurse as procedural supervisor

II. General Information

A. A qualified person, trained in suctioning, must be available when a pupil requiring suctioning is at school.
B. The pupil's school program is arranged so that he or she is within easy access to the suctioning equipment.
C. The pupil should be encouraged to cough to clear the airway to possibly eliminate the need for suctioning.
D. Unnecessary suctioning should be avoided to reduce chances of injury and infection.
E. Aseptic or clean techniques may be used for suctioning. An aseptic technique requires the use of sterile gloves and a sterile catheter. The clean technique does not require a sterile glove, and the pupil's same catheter may be used throughout the school day.
F. Suctioning shall be performed according to the prescribing physician's special orders and on request of the pupil. This procedure shall also be performed when:
    1. Noisy, moist respirations occur.
    2. Respiratory distress exists.
    3. Mucus is visible at the tracheal opening.
G. Personnel giving the treatment should have access to the prescribing physician's order for handling adverse reactions and providing needed intervention, including possible use of a resuscitation bag.
H. This procedure requires a physician's authorization. The service must be reauthorized yearly by the prescribing physician and the parent.

III. Guidelines

A. Purpose

    To maintain an open airway by keeping it clear of excessive secretions

B. Equipment (Parents are responsible for providing and maintaining equipment.)
    1. A suction machine, including collecting bottle and connecting tube and adapter when needed (Suction equipment must be available for use on a bus as well as at school. Equipment for use on a bus must be portable [powered by battery or operated manually].)
    2. A resuscitation bag when ordered
    3. Sterile disposable suction catheters
    4. Nonwaxed clean paper cups
    5. Supply of sterile normal saline solution
    6. Supply of sterile water (to clear catheter) (Tap water is used for the clean technique.)
    7. Sterile syringes for introducing saline solution into trachea or individual dose containers of saline
    8. Disposable sterile plastic or latex gloves
    9. Clean tissues or gauze pads
    10. Plastic-lined wastebasket (kept beside machine and used for contaminated materials)
    11. Alternative suction equipment for use if primary equipment fails (For example, have foot-operated or battery-operated equipment available.)

Tracheostomy: Suctioning—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Verify at the beginning of each school day that all equipment and supplies are ready for immediate use. a. Use the sample checklist as a guide. b. Initial the list when verified.	This step is designed to ensure that all equipment is available. A sample checklist follows this procedure (see "Daily Suctioning Checklist" on page II-103).	
2. Wash hands prior to suctioning unless an emergency occurs and you do not have time.		
3. Assemble and prepare the equipment in a clean area. a. Fill a paper cup with sterile water (clean water for clean technique). b. Open the catheter package without touching the catheter. c. Fill sterile syringe with saline solution or use individual dose containers.		
4. Position pupil and place tissue or gauze nearby.	Positioning depends on the pupil's condition and physician's recommendations.	
5. Remove the inner cannula (if present) and clean it according to the steps in the procedure under "Tracheostomy: Care and Cleaning of Inner Cannula and Stoma."		
6. Put a glove on the hand that handles the catheter.	A glove is used to keep the catheter and hand clean.	
7. Holding the suction connection tubing with the ungloved hand, attach catheter to suction tubing with the gloved hand. Turn on the machine with your ungloved hand.	Handle the catheter with the gloved hand only.	
8. Place the tip of the catheter in a cup of sterile water (or tap water for clean technique) to draw a small amount of water through the tip.	This step ensures that the catheter is open and lubricated.	

Tracheostomy: Suctioning—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
9. Suction as follows:	Suctioning loosens secretions and stimulates coughing.	
a. Leave the vent open and introduce the catheter into the tracheal opening until meeting resistance.	When introducing the catheter, *never* cover the vent.	
b. Withdraw the catheter slightly.	This technique prevents injury to the tissues.	
c. Place the ungloved thumb over the vent. With the gloved hand, gently rotate the catheter between the thumb and forefinger while slowly withdrawing the catheter.	If the catheter remains in one place, the mucus membranes will be drawn against it. This occludes the tube and injures tissue.	
d. Withdraw the catheter immediately when the pupil begins to cough.	The catheter obstructs the cannula and may interfere with bringing up secretions.	
e. Suction no longer than 10 seconds at a time.	Allow 1 to 3 minutes between suctioning periods. Prolonged suctioning can cause throat spasms, loss of oxygen, and changes in heartbeat.	
f. Repeat steps 8 and 9 (a) through (e) as needed.	Respirations should be quiet and effortless at the end of suctioning.	
g. If secretions are thick, instill 3 to 5 cc of saline solution into the tracheal opening. Then repeat steps 8 and 9 (a) through (e) as needed.	Saline aids in dissolving mucus. This will cause coughing; therefore, hold a tissue near the trachea to catch spray and/or mucus.	
h. When a mucus plug obstructs the outer cannula, instill saline solution (up to 20 cc) and suction until the plug is loosened. If the plug cannot be loosened and the pupil is in respiratory distress or unable to breathe, remove the outer cannula and replace it according to the steps in the procedure under "Tracheostomy: Tube Replacement."		

Tracheostomy: Suctioning—Procedure (Continued)

Essential steps	*Key points and precautions*	*Child specific*
i. Supply deep breaths with a resuscitation bag between suctioning attempts when ordered to do so by the prescribing physician.	Use of a resuscitation bag provides deep breathing and/or stabilizes disrupted breathing patterns.	
10. Suction sufficient water through the catheter to clear out tubing.		
11. Holding the catheter in the gloved hand, pull the glove off, encasing the catheter in the glove, and discard both unless orders specify use of the same catheter all day (clean technique).		
12. Discard the paper cup and syringe.		
13. Recap sterile water and make sure that the equipment is ready for immediate use.		
14. Record the procedure on the SPHCS log.		
15. At the end of the school day, empty the contents of the suction bottle into the toilet. Wash the bottle with soap and water; wear gloves during the process.		

Daily Suctioning Checklist

Name of pupil

Use one form per month and keep the form attached to the machine at all times during the month of use.

- Inspect the machine and supplies **daily**. Check off (✔) each item as it is inspected. After you complete each daily inspection, initial or sign and enter any applicable remarks.
- The person administering specialized physical health care is responsible for care of equipment and supplies and shall perform inspection as stated above.
- If pupil is absent, enter "A" and reason in "Remarks" column.
- After this form has been completed at the end of each month, file it with the service log in the health insert. This form is an interim mandatory health record. Begin each month with a new form.

Checklist Review	
Date	*Signature/Title*

Month/Year	*Machine*									*Supplies*													
Day/Date	Plug/Outlet	Turn on	Tube connections all tight	Pressure gauge working	Bottle clean	Clean catheter attached	Draws solution		Initials/Signature / Remarks	Catheters (sterile/disposable)	Clean paper cups (nonwaxed)	Normal saline solution (sterile)	Distilled water	Antiseptic	Disposable syringe (sterile)	Clean gloves (disposable)	Tissue/Gauze Cotton	Resuscitation bag (if ordered)	Pipe cleaners	Lubricating jelly		Initials/Signature / Remarks
M																							
T																							
W																							
T																							
F																							
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II—103

Tracheostomy: Tube Replacement

Tracheostomy tubes (outer cannula) that become displaced or occluded will immediately be replaced when:

1. A life-threatening situation occurs during which rescue breathing is impossible or when the pupil is in severe respiratory distress without the tube in place.
2. The pupil's prescribing physician orders this procedure to be performed and when the pupil's individualized education program (IEP) indicates the need for this procedure.

> The physician's orders must state whether the pupil's condition is such that the tube should always be replaced after becoming dislodged.
>
> If a pupil is in respiratory distress, paramedics will be called and parents notified immediately.

I. Personnel Involved

A. School nurse

B. Designated school personnel, direct or indirect supervision

Replacement of a tracheostomy tube shall be performed only by personnel who have current training in this procedure.* Whenever possible, tube replacement should be performed by the school nurse.

C. School nurse as the indirect procedural supervisor (*Indirect* means that the nurse is available either on site or through telephone communication.)

II. General Information

A. Emergency procedures shall be fully discussed and documented on the IEP.

B. Nonemergency procedures shall also be discussed with the parent and noted on the IEP.

C. A sterile additional tracheostomy tube (of appropriate size) and an obturator are to be kept with the pupil at all times.

D. If a problem occurs with reinserting the tube, the emergency medical service (911) and parent should be called to transport the pupil to a medical facility.

E. Parents are to be notified after any reinsertion procedure.

III. Guidelines

A. Purpose

B. Equipment (Parents are responsible for providing equipment.)

1. Sterile tracheostomy tube (appropriate size) and obturator
2. Scissors
3. Twill tape for tying
4. Suction machine, including collecting bottle, connecting tube, and adapter when needed
5. Resuscitation bag, when ordered
6. Sterile disposable suction catheters
7. Nonwaxed clean paper cups
8. Supply of sterile normal saline solution
9. Sterile disposable syringes for introducing saline solution into the trachea or into individual dose containers of saline
10. Disposable clean plastic or rubber gloves
11. Clean tissues or gauze pads
12. Plastic-lined wastebasket (kept beside suction machine and used for contaminated materials)
13. Water-soluble lubricant

**Training* means preparation in the appropriate delivery and skillful performance of specialized physical health care services. . . . Medically related training of employed designated school personnel is that training in an approved program in standardized procedures provided by a qualified school nurse, qualified public health nurse, qualified licensed physician and surgeon, or other approved programs to enable the person to provide the specialized physical health care services necessary to enable the child to attend school. *California Code of Regulations, Title 5, Education,* Section 3051.12(b)(1)(E)2.

Tracheostomy: Tube Replacement—Procedure

Essential steps	*Key points and precautions*	*Child specific*
1. Wash hands if the pupil's status permits.	A calm, assured approach promotes the pupil's cooperation and ease of inserting the tube.	
2. Assemble the equipment.		
3. Reassure the pupil during the procedure.		
4. Position the pupil with the head tilted back as far as possible. If inserting the device is difficult, reposition the head slightly forward.		
5. Open the tracheostomy tube package.		
6. Put on gloves if the pupil's status permits.		
7. Insert the obturator into the tube and apply lubricant.		
8. Insert the tracheostomy tube with obturator into the stoma.		
9. Holding the tracheostomy tube with one hand, pull out the obturator and insert the inner cannula with the other hand.		
10. Unroll the twill tapes while the pupil or another person holds the tube in place until it has been secured with tapes.		
11. Secure the tracheostomy tube with twill tapes.	Secure the knot so that it will come at the side of the pupil's neck.	
12. Record the procedure on the SPHCS log. Inform the parent.		

Part III

Preventing the Spread of Infectious Diseases

Because of the epidemic of the acquired immunodeficiency syndrome/human immunodeficiency virus (AIDS/HIV) infection, there is great interest in what precautions can be taken to prevent the spread of all infectious diseases. The spread of HIV infection has been the impetus for taking a critical look at how all infections can be spread in schools. Even a cursory look reveals carelessness about basic hygienic practices in schools. For example, if facilities exist for handwashing that include running water, there often is no soap. The lunch schedules rarely allow time for handwashing before eating. Pupils who require diapering and feeding are at times in facilities without running water. Persons who routinely administer first aid frequently do not use gloves and dispose of bloody wastes without consideration for staff members who handle refuse.

Because of the concern generated by AIDS/HIV infection, the California Legislature has mandated that schools inform their employees annually, or more often if new information becomes available, about appropriate methods employees may use to prevent exposure to both AIDS and hepatitis B (*Health and Safety Code*, Part 1 of Division 1, Section 199.81). Information about hepatitis B must make the public aware that a vaccine to prevent contraction of this disease is available and that the cost of a vaccination may be covered by the health plan benefits of an employee.

Purpose of Part III

This part of the publication was prepared as a guideline for school districts to provide information for employees in all school settings about preventing the spread of all infectious diseases, including AIDS/HIV infection and hepatitis B. **There have been no reported cases of AIDS/HIV infection from exposure in schools. Evidence from thousands of cases has shown that family members caring at home for persons with AIDS have not become infected unless exposed by engaging in sexual activity or by sharing needles for drugs.** The likelihood of HIV transmission in the school setting is extremely remote because the body fluids known to contain enough HIV to spread the disease are blood, semen, and vaginal secretions. The transmission of hepatitis B is more likely to occur in schools, especially among specific populations of pupils, such as those who reside in residential facilities for the developmentally disabled.

The precautions recommended in this guideline are appropriate for preventing the spread of *all* infectious diseases in schools and are most likely to prevent the spread of germs that cause the common cold, influenza, impetigo, ringworm, and the myriad of other germs that play havoc with children and their teachers during the school year. (**The emphasis given to handwashing does not imply that one may contract AIDS/HIV infection because of inadequate handwashing**). Handwashing is stressed because it is a simple, basic method for preventing the spread of a variety of germs that cause other diseases that interfere with school attendance and that can be serious and even fatal.

Confidentiality for all medical information is important and must be honored carefully by school personnel as well as by health professionals. Sharing information about AIDS/HIV infection is of special importance to protect from discriminatory actions the persons who are infected. Sharing information about AIDS/HIV infection is prohibited by law and subject to a civil penalty and a fine not to exceed $5,000, except in specific circumstances (*Health and Safety Code*, Part 1 of Division 1, Section 199.42).

Universal Precautions

The basic principle promoted by this guideline is to use *universal precautions*. This means to use appropriate precautions, regardless of your knowledge of which germs are present in the individual's semen, vaginal secretions, blood, saliva, nasal discharges, or vomitus. In other words, when handling the discharges from another person's body, always use reasonable precautions, especially when handling discharges containing blood. Do not limit handwashing, gloving, and careful disposal of contaminated refuse to those times when you are dealing with persons who you know carry specific germs.

One outcome of using universal precautions will be decreased pupil and staff absences caused by common infections such as colds and influenza. Another positive outcome will be teaching, by modeling, which precautions are appropriate when one handles another persons' discharges from the

body, including the special care given to blood and bloody discharges because of AIDS/HIV infection, hepatitis B, and other blood-borne infections.

Using universal precautions removes the problem of needing to know which persons in the school setting are infected with which germs. Routine use of appropriate precautions eliminates much of the fear of not knowing whether a pupil in the classroom has an infection. Sometimes the parents or the pupils themselves are afraid to share information about infections. More often, the infected person is unaware of his or her infectious state. This situation is especially true about persons infected with HIV.

Lesson One: Information About Infectious Diseases

Audience

All school personnel and volunteers

Objectives

Staff will be able to:

1. Describe five infectious diseases caused by viruses:
   a. AIDS/HIV infection
   b. Cytomegalovirus (CMV)
   c. Hepatitis A
   d. Hepatitis B
   e. Herpes
2. Describe how five infectious diseases caused by viruses are transmitted:
   a. AIDS/HIV infection
   b. Cytomegalovirus (CMV)
   c. Hepatitis A
   d. Hepatitis B
   e. Herpes
3. List infectious diseases for which there are no cures and no vaccines:
   a. AIDS/HIV infection
   b. Cytomegalovirus (CMV)
   c. Hepatitis A
   d. Herpes

Restate that there is a vaccine for hepatitis B and that the cost of the vaccination may be covered by an employee's health plan.

Procedures

1. Provide staff with information regarding the following infectious diseases:
   a. AIDS/HIV infection
   b. Cytomegalovirus (CMV)
   c. Hepatitis A and hepatitis B
   d. Herpes
2. Hold a question-and-answer session. Videos and materials specifically about AIDS and the workplace are available from the local chapter of the American Red Cross.

Sample Lecture Script

People with communicable diseases such as AIDS/HIV infection, hepatitis A, hepatitis B, CMV (cytomegalovirus), and herpes are in our communities and schools.* This staff development session will provide information regarding these diseases. A subsequent staff development session will present appropriate methods and techniques for preventing the spread of these and other infectious diseases.

The U.S. Public Health Service projects a cumulative total of 270,000 diagnosed cases of AIDS and 179,000 deaths in the United States by 1991. Undiagnosed HIV infections at that time could approach 10 million or more. These figures highlight the vital importance of being informed about this disease and of knowing appropriate methods for preventing exposure. (This topic is covered in Lesson Two.)

AIDS/HIV Infection

HIV infection can destroy the body's defenses against some infections and cancers. The HIV virus is transmitted:

- By blood, semen, or vaginal secretions during sexual contact with an infected person
- Through the sharing of contaminated needles
- Through the transfusion of infected blood (a rare occurrence since 1985)
- From an infected mother to her child before or at birth and possibly through breast feeding

AIDS/HIV infection is caused by the human immunodeficiency virus (HIV). Although persons who are infected with HIV may show no signs of illness, they are capable of infecting others. AIDS is the latter stage of HIV infection. AIDS may develop as long as seven to ten years after a person has become infected with HIV.

Research studies have shown that the AIDS virus (HIV) is not transmitted through nonsexual or

* Please note that in the script, *AIDS* is consistently referred to as *AIDS/HIV infection*. The preferred terminology is *HIV infection* because persons with AIDS are infected with HIV and have severe symptoms at the latter stage of infection. In the future most health professionals will refer to HIV-infected persons as persons with asymptomatic HIV infections or as persons with symptomatic HIV infection. *AIDS* will become an obsolete term. Never refer to persons with AIDS as victims of AIDS.

nonblood contact. HIV, an extremely fragile virus, cannot reproduce outside the human body. The virus does not linger on clothing or objects handled by persons with AIDS. The virus is not transmitted though the air. Research studies have shown that you *cannot* catch the virus:

- By touching HIV-infected persons
- From a toilet seat
- From a drinking fountain
- From a swimming pool
- By eating food prepared by HIV-infected persons
- By giving (donating) blood
- From mosquito bites

The AIDS virus is easily washed away with soap and water or with ordinary household bleach (one part bleach to ten parts water). There is no vaccine for AIDS/HIV infection.

Health and Safety Code Section 199.42 states that public records containing personal identifying information relating to AIDS/HIV infection shall be confidential and not disclosed except with written authorization by the person or his or her parent or guardian. The written authorization to share information related to AIDS/HIV infection must specify which individuals can be informed.

Cytomegalovirus (CMV)

Cytomegalovirus (CMV) is a viral disease causing cellular enlargement. The majority of the cases are mild or without symptoms. The disease can be spread though intimate contact with infected tissues or body fluids. Good personal hygiene is the major preventive measure. The virus can be potentially dangerous to:

- The unborn child of a pregnant woman with her first infection
- A person with a compromised immune system
- Someone already weakened or ill who is likely to develop a severe infection

Once a person has been infected, the virus remains in the body for life and can be reactivated. No vaccines or medications for CMV currently exist. Most adults will show previous exposure to this virus by blood test titer (the concentration of a substance in solution as determined by titration).

Hepatitis A

Hepatitis A is a viral disease which causes inflammation of the liver. The disease is spread by person-to-person contact and by contaminated water and food. Since the mode of transmission is the fecal-oral route, the best prevention is proper handwashing. Hepatitis A causes a mild infection in preschool children and is easily spread among household groups. The symptoms are flu-like, or the infection can occur without symptoms. Where environmental sanitation is poor, the infection is common. Protection against contracting the disease can be acquired with an injection of immune globulin, but the immunity is temporary. However, a person can have hepatitis A only once. Unlike persons with hepatitis B, an individual does not become a carrier of the hepatitis A virus. **(Careful handwashing is important.)**

Hepatitis B

Hepatitis B is also a viral disease causing inflammation of the liver. Infection with the hepatitis B virus can result in mild to severe illness. Severe infections can cause chronic illness or death.

Hepatitis B carriers may appear healthy and, therefore, are often unidentified. The hepatitis B virus is in the body fluids of the carrier (primarily in blood, oozing cuts, and, to a lesser degree, in semen, vaginal secretions, and saliva).

People who are in contact with infected persons and people in high-risk categories *should be vaccinated*; for example, cancer patients on certain medications, the developmentally disabled living in institutions, hemodialysis patients, or anyone with a weakened ability to fight infection.

Vaccination, given in a series of three injections, and proper environmental hygiene can reduce the spread of hepatitis B. *The cost of the vaccine for hepatitis B may be covered by an employee's health plan.*

Herpes

There are two types of herpes simplex viruses. Type one herpes simplex virus usually produces infection on the lip or around the mouth. Lesions are spread by direct physical contact to the lesion, especially to mucous membranes. Type two herpes simplex virus usually is found on the genital area.

Persons with herpes infection in the genital area can transmit the virus during sexual intercourse. Currently, no vaccine is available for either type of herpes simplex virus.

The most important technique in preventing the spread of this disease is *handwashing*. Since the herpes viruses (types one and two) are present in lesions, gloves are recommended when one is caring for a person with an active infection on exposed skin or mucous membranes; for example, herpes lesions appear on the mouth of a person requiring feeding or insertion of a gastric tube; or herpes lesions are on the genitalia of a person requiring catheterization or assistance with toileting.

147

Lesson Two: Techniques for Preventing the Spread of Infectious Diseases

Audience

All school personnel and volunteers

Objectives

Staff will be able to:

1. Demonstrate specific procedures for classroom and personal cleanliness that help reduce the spread of infectious diseases:[1]
   a. Handwashing
   b. Gloving
   c. Cleaning up spills
   d. Maintaining personal and classroom cleanliness
2. Assess the remote risk of being infected with HIV at school, and explain the use of hygienic practices to prevent the spread of other infectious diseases.

Procedures

1. Provide staff with information regarding procedures for:
   a. Handwashing
   b. Gloving
   c. Cleaning up spills
   d. Maintaining personal and classroom cleanliness
2. Hold a question-and-answer session.
3. Distribute handouts for:
   a. Handwashing
   b. Gloving
   c. Cleaning up spills
   d. Maintaining personal and classroom cleanliness

Notes for Presenters

1. Ascertain the following before the in-service training session begins:
   a. Are there any classrooms in the work site that do not have running water? If so, what is your alternative method of handwashing?
   b. Which of the Environmental Protection Agency's (EPA's) approved disinfectant solutions are you going to use at your work site? You will need to inform your staff about which solution to use and where to get it. Ordinary household bleach solution of one to ten dilution is approved for use, but it *must be mixed daily or whenever needed to ensure potency*.
2. Things to discuss with the site custodian:
   a. Classroom staff should clean the toilet seats and potty seats between uses, and the custodian must disinfect them at the end of each day. (See "Maintaining Personal and Classroom Cleanliness" on pages III–9 through III–11.)
   b. The custodian should do the second bagging of the double-bagged waste.
3. Things to do before presenting in-service training:
   a. Collect gloves, plastic bags, or any other supplies needed for demonstrations during in-service training.
   b. Copy any handouts to be provided.

Sample Lecture Script

The previous staff development session provided information regarding infectious diseases such as AIDS/HIV infection, cytomegalovirus (CMV), hepatitis A and B, and herpes.[2] Except for hepatitis B, these diseases have no vaccines and no known cures. A vaccine is available for hepatitis B, and the cost of that vaccine may be paid by an employee's health plan.

During our work we may come in contact with pupils and staff who are ill, are in the incubation period of a disease, or are carriers of a disease. You will not know who is infectious. Therefore, it is crucial to use procedures for personal and classroom cleanliness *all* of the time with *all* of the pupils. An infectious disease cannot be recognized

[1] A videotape that can be used is *Soap Opera*, which is available from the Office of the Orange County Superintendent of Schools, 200 Kalmus Dr., Costa Mesa, CA 92628; telephone 714-966-4000.

[2] Please note that in the script, *AIDS* is consistently referred to as *AIDS/HIV infection*. The preferred terminology is *HIV infection* because persons with AIDS are infected with HIV and have severe symptoms at the latter stage of infection. In the future most health professionals will refer to HIV-infected persons as persons with asymptomatic HIV infections or as persons with symptomatic HIV infection. *AIDS* will become an obsolete term. Never refer to persons with AIDS as victims of AIDS.

in many people who are in the incubation period or who are carriers because they are not ill.

Preventing the transmission of known and unknown infectious agents must have a high priority. Using appropriate procedures can markedly decrease the spread of infectious diseases. This staff development session will provide some guidelines for all personnel who have direct contact with pupils who may be ill or incubating or carriers of disease. In addition, we will deal with clothing, equipment, floors, and counter surfaces that may be contaminated.

AIDS/HIV infection is transmitted only by blood, semen, or vaginal secretions. Unlike AIDS/HIV infection, many other infectious diseases that are more common in schools are transmitted by many of the body's secretions such as blood, semen, saliva, feces, urine, vomitus, or droplet spray from sneezing or coughing.

Transmission of diseases **(other than AIDS infection)** can occur directly and/or indirectly, depending on the nature of the individual disease. Direct transmission can occur with sneezing or coughing and close physical contact with body fluids. Indirect transmission can occur through contaminated food or water and contaminated objects such as towels, toys, pencils, eating utensils, clothing, and diapers. Germs enter the noninfected person's body in a variety of ways; for example, through the mucous membranes or a break in the skin.

This staff development session will focus on diseases that are transmitted by blood, semen, or vaginal secretions to the noninfected person's blood. These diseases are blood-to-blood diseases (for example, AIDS/HIV infection and hepatitis B) because the germ must go from the blood of the infected person to the blood of the noninfected person. During this session we will discuss specific techniques for dealing with blood, semen, and vaginal secretions, which may or may not be infected. These techniques include handwashing, gloving, and appropriate cleaning and disposal of blood spills and semen.

Handwashing

Handwashing is the single most effective tool that you possess to protect yourself, your coworkers, and your pupils. Although handwashing is a routine procedure for all of us, using the proper technique is important. Because of the vital role handwashing plays in the control of infectious diseases, the steps involved in handwashing and the rationale for these steps will be reviewed.

The following are guidelines for handwashing:

A. Purpose: To reduce the number of microorganisms on the hands

B. Equipment

1. Liquid soap in dispenser (preferred to bar soap)
2. Paper towels
3. Hand lotion
4. Covered waste receptacle with disposable plastic liner

C. Procedures for Handwashing

1. Remove all jewelry. Jewelry should not be worn when working with pupils who require repeated physical contact and care. Microorganisms can become lodged in the settings or stones of rings.
2. Wet hands with warm running water. Warm water, combined with soap, makes better suds than does cold water. Hot water removes protective oils and will dry the skin. Running water is necessary to carry away dirt and debris. The key element is the combination of soap, friction, time, and running water. (Warm water is not essential.)
3. Wash hands, using a circular motion and friction, for 15 to 30 seconds. Include the front and back surfaces of hands, between the fingers and knuckles, and around the nails and the entire wrist. Avoid harsh scrubbing to prevent skin breaks.
4. Rinse hands well under warm running water. Hold the hands under the water so that water drains from the wrist area to the fingertips.
5. Dry hands well with paper towels and turn off the faucet with a towel; discard the towel. Because of frequent handwashing, it is important to dry the hands gently and thoroughly to avoid chapping. Chapped

skin breaks open, thus permitting germs to enter one's system.

6. Apply lotion as desired. Lotion helps to keep skin soft and reduces chapping.

Gloving

Why do we use gloves? Because of the seriousness of the blood-to-blood diseases (hepatitis B and AIDS/HIV infection), we are taking extraordinary precautions to prevent the remote and unlikely possibility of transmitting one of these diseases in the school setting. Gloves also help prevent exposure to many other serious infections.

You should always wear gloves to protect yourself when you are dealing with blood, semen, or vaginal secretions because your skin may have microscopic breaks of which you are unaware. Organisms need a means of entry into your body, and even microscopic breaks in your skin can provide an entry point. No cases have been reported of HIV infection from infected blood spilled on unbroken skin. In the United States, as of 1989, only six cases have been reported of HIV infections from the exposure in clinical settings of large amounts of infected blood on broken skin.

Use gloves only once and for only one pupil and then dispose of them in the proper manner. Remove a glove by grasping the cuff and then stripping the glove off by turning it inside out.[1] Dispose of gloves in double plastic bags. Wash the hands after removing the gloves. (Germs multiply rapidly inside gloves.) Wear gloves when cleaning blood, semen, or vaginal secretions from an environmental surface, such as a counter or sink.

Cleaning Up Spills

Wear gloves when you are cleaning vomitus or other body secretions. Clean spills with paper towels and soap and water before you clean with an EPA-approved disinfectant or with one part bleach to ten parts water. A bleach solution should be discarded after one day because it loses its potency. Dispose of paper towels in double plastic bags, not paper. Rinse mops in disinfectant. If a large amount of liquid is to be cleaned up, it should first be absorbed with sawdust or similar commercially prepared product and swept up. Always wash your hands after cleaning up any spill of body secretions.

[1] The presenter may demonstrate this procedure to the audience.

Maintaining Personal and Classroom Cleanliness

Because of the close personal contact required by many pupils in our schools, personal and classroom cleanliness is important to prevent the transmission of infectious diseases.

Personal Cleanliness

Follow these procedures to maintain personal cleanliness:

1. Promote personal health with daily health practices. Develop good habits related to eating, sleeping, and exercising. Use preventive vaccines to enhance your immune system's ability to fight infections.
2. Wash your hands frequently.
3. Do not wear jewelry such as rings or dangling bracelets during working hours.
4. Do not share personal care items such as combs, lipstick, or toothbrushes.
5. Keep fingernails clean and trimmed short.
6. Do not kiss pupils.

Classroom Cleanliness

Follow these procedures, when applicable, to maintain classroom cleanliness:

1. Provide handwashing facilities in the classroom.
2. Use disposable paper towels rather than cloth.
3. Maintain a storage area for clean clothing, linens, utensils, equipment, and disposable items. These areas *must* be separate from the area used for storage of soiled items.
4. Store each pupil's personal grooming items separately.
5. Use clean techniques when handling food and utensils during preparation, serving, storage, and cleanup.
   a. Keep the area used for preparing and serving food clean and separate from the area for clean up of dirty dishes and utensils.
   b. Scrape food from soiled dishes into a plastic-lined waste receptacle. Dishes need

to be rinsed and placed in a dishpan filled with warm, soapy water and washed as soon as possible.

c. Wash the dishes in warm, soapy water. If an automatic dishwasher is not available, soak the dishes for one minute in a solution of household bleach (one part bleach to ten parts water) after washing with soap and water.

d. Dry the dishes before storing them.

e. Clean the sink, counter tops, trays, and any areas where food or liquid has been spilled.

6. Use soapy water and disinfectant to clean equipment such as tables, mats, and chairs as well as the sink, counter tops, and trays.
7. Wash and disinfect equipment soiled by a pupil's blood, saliva, nasal drainage, urine, and so forth before another pupil uses this equipment.
8. Clean the following with a disinfectant after each use: changing tables, portable potty seats, and toilet seats. Rinse them with clean water and dry. Empty and rinse the portable potty bowl after each use.
9. Disinfect all toilets and potties (both seats and bowls), changing tables, and sinks at the end of each day.
10. Discourage the use of cloth toys. Cloth toys used by a pupil should not be shared with other pupils.
11. Clean wheelchairs and trays with soap and water after feeding the pupils.
12. Check with the physical therapy unit personnel to be assured that the appropriate disinfectant is used to clean orthopedic equipment; for example, splints, braces, and casts.

Cleaning Schedule

If gloves are worn when a disinfectant is being used, they must be washed and air-dried after each use. They must be stored in the area reserved for soiled articles in the room where they are used.

Disinfectants must be selected and used according to the information given in "Selecting Disinfectants." Sprays are not recommended.

If a bleach solution is used, it must be mixed daily; and doors must be kept open for air circulation.

The following cleaning schedule indicates how often certain areas must be cleaned:

1. Clean the following areas and items daily:
   a. Classrooms, bathrooms, and the kitchen
   b. Floors
   c. Sinks and faucet handles
   d. Cabinet drawer handles
   e. Doorknobs
2. Clean the following bathroom areas and fixtures daily:
   a. Walls behind sinks
   b. Toilets
   c. Portable potty (After disinfecting, rinse the surface with clear water and wipe it dry.)
3. Vacuum carpets daily. (If a rug or carpet is soiled, it should be disinfected immediately.)
4. Clean waste receptacles monthly.
5. Steam clean carpets quarterly.

Selecting Disinfectants

No single agent should be used for both handwashing and environmental disinfection because no single agent has been manufactured for both purposes. Many different chemical disinfectants and germicidal handwashing solutions are available commercially, and the selection of a single product is not an easy task. Factors such as cost, geographic availability of vendors, and the ease of use must be considered. Any chemical disinfectant, detergent, or germicidal handwashing product that is suitable and safe for hospital use and that is registered by the Environmental Protection Agency would be suitable for use in a school setting.

A. Selecting an Environmental Disinfectant

1. Select an agent that has been registered by the U.S. Environmental Protection Agency (EPA) for use as a disinfectant in medical facilities and hospitals.
2. Select an agent that belongs to one of the following classes of disinfectants:
   a. Ethyl of isopropyl alcohol (70 to 90 percent)
   b. Quaternary ammonium germicidal detergent solution (2 percent aqueous solution)

Part IV

Routine Care Not Requiring a Physician's Authorization

This section is included to provide guidance and general information for the school nurse as she or he delivers health services to pupils with orthopedic conditions. The goal of the material in this section is to protect pupils and teachers from injury in the school environment.

c. Iodophor germicidal detergent (500 ppm available iodine)[4]
d. Phenolic germicidal detergent solution (1 percent aqueous solution)
e. Sodium hypochlorite (100 ppm available chlorine)

3. If the products are used in accordance with the manufacturer's instructions, they are safe to use.

B. Selecting a Germicidal Handwash

1. Select a germicidal handwashing agent that the EPA has registered for this use.

2. Select a product that contains one of the following active antimicrobial agents:
   a. Chlorhexidine
   b. Hexachlorophene
   c. Iodophors
   d. Alcohols

3. If these products are used in accordance with the manufacturer's instructions, they are safe to use.

[4] *Ppm* represents parts per million.

Lesson Three: Control of Infectious Diseases in the Classroom Setting: Diapering and Toileting

Audience

School personnel and volunteers who may have direct contact with pupils who need diapering and/or who deal with pupils who need toileting and are unable to do so independently

Objectives

Staff will be able to:

1. Demonstrate hygienic diapering and toileting techniques.
2. Use safety precautions for the pupils who are being diapered and assisted with toileting.

Procedures

1. Provide staff with steps and procedural guidelines for hygienic diapering and toileting techniques.
2. Hold a question-and-answer session.
3. Distribute handouts on diapering and toileting.

Sample Lecture Script

Since diapering and toileting are possible ways to spread infectious diseases, proper techniques must be used at all times. Because various infectious diseases can be spread through the *fecal-oral route*, personnel must know and use good hygienic practices at all times.

Diapering

The following is an equipment list for hygienic diapering procedures:

- Wet disposable wipes
- Disposable diapers
- Plastic disposable bags
- A changing table with a safety belt
- Large disposable towels
- Plastic-lined wastebasket
- Disposable gloves
- Disinfectant for cleaning changing tables

The following are steps and key points in diapering procedures:

1. Place all materials in a convenient, close location before beginning a procedure. The materials include a disposable diaper, a large disposable towel, a plastic bag, wet wipes, and plastic gloves.
2. Place the pupil on the changing table with the buttocks on a large disposable towel. A safety belt must be around the pupil and above the umbilicus. Never leave the pupil unattended on the changing table.
3. Have the pupil's clothing above the navel before changing a diaper. Use disposable gloves if the pupil has had a bowel movement or is menstruating.
4. Wash from front to back, using wet wipes only once. This procedure helps to prevent females from getting vaginal or bladder infections from the feces.
5. Raise the pupil's legs, remove the diaper (place it on the corner of the disposable towel); then wash the buttocks area. After washing the buttocks, place the soiled diaper in a plastic bag and discard the bag in a waste container.

Note: This sample script is provided as a guideline.

6. Remove the dry towel underneath the buttocks and discard it. If you are wearing gloves, remove and discard them before you handle a clean diaper. Dispose of the gloves in a covered receptacle lined with plastic bags.
7. Wash your hands before you touch the child or a clean diaper.
8. Place a clean diaper on the pupil.
9. Wash the pupil's and your hands and return the pupil to class.
10. Return and wash the table top with disinfectant; rinse and dry the surface. Inform the parent or caregiver if the pupil has had a bowel movement and describe its consistency and color.
11. Wash your hands before returning to the classroom.

Toileting

The following is a list of guidelines for hygienic toileting procedures:

1. A pupil must be observed at all times while in the bathroom.
2. A pupil should use the same potty chair or potty seat each time, if possible, and should not be on the chair for any longer than ten minutes.
3. Toileting should be avoided during feeding time whenever possible.
4. The excreta must be emptied from the potty chair after each pupil's use and the potty bowl rinsed out.
5. A male pupil who uses a urinal must have his own urinal marked with his name and kept in the bathroom on a shelf, and **not on the floor**. Encourage quadriplegics to stand, if possible, to help empty the bladder and to prevent residual urine in the bladder.

These steps and key points in toileting procedures are to be followed by the adult supervising the child:

1. Place all materials in a close, convenient place before starting a procedure. The materials include wet wipes, toilet tissue, disposable gloves, and a diaper (if needed).
2. Have the pupil sit on a toilet or potty seat. He or she should not sit longer than ten minutes. Do not allow the pupil to play with toys. Following these steps helps the pupil to develop good toilet habits.
3. Teach the pupil how to wipe himself or herself appropriately (from front to back) with toilet tissue after the pupil has completed evacuation. If the rectal area is still unclean, clean the perineal and rectal areas with wet disposable towels. This procedure is important because a pupil who has not mastered wiping in the perineal and rectal areas may leave feces on the hands, thereby spreading infection to the pupil as well as to others. When you are teaching toilet habits to a pupil, make sure that he or she does not leave feces on the hands.
4. Teach the child to wipe from the perineal area back to the rectal area, discarding toilet tissue into toilet or potty chair. You must continually supervise this procedure if the child is to master it.
5. Make sure that a clean diaper is available and near a pupil who wears a diaper. **Never leave a clean diaper on the floor.**
6. Place a soiled diaper in a plastic bag, tie the bag, and place it in a plastic-lined waste basket. **Never leave a soiled diaper on the floor.**
7. Have the pupil wash the hands before he or she leaves the bathroom.
8. Disinfect the potty or toilet seat and rinse and dry the surface.
9. Wash your hands before returning to the classroom.

Selected References

The following references were used to develop the content in Part III:

- *Guidelines and Procedures for Meeting the Specialized Physical Health Care Needs of Students*. Sacramento: California State Department of Education, 1980.
- *Techniques for Preventing the Spread of Infectious Diseases*. Sacramento: California State Department of Education, 1983.*

* See the last page in this publication for information on ordering *Techniques for Preventing the Spread of Infectious Diseases*, published by the California Department of Education.

- *Techniques for Preventing the Spread of Infectious Diseases*. Los Angeles: Los Angeles County Office of Education, 1987.

Handouts for Lessons and Legislation

The handouts on the following pages summarize the content in the lessons and provide steps for performing the health care procedures that were discussed. Handouts are provided for lessons two and three. Handouts for lesson two cover handwashing, gloving, cleaning up spills, and maintaining personal and classroom cleanliness. Handouts for lesson three provide information for diapering and toileting. Copies of legislation are for *Health and Safety Code* sections 199.42 and 199.81.

Handwashing

Why?

Handwashing is the single most important technique for preventing the spread of infectious diseases.

When?

Handwashing must be done:

1. Before eating
2. Before handling clean equipment or utensils
3. Before and after assisting with feeding
4. After assisting with toileting or diapering
5. After contact with any body secretions
6. After handling soiled diapers, garments, or equipment
7. After removing disposable gloves

How?

1. Remove all jewelry.
2. Wet hands with warm running water.
3. Apply liquid soap and lather it well.
4. Wash hands, using a circular motion and friction for 15 to 30 seconds. Include the front and back surfaces of the hands, between the fingers and knuckles, and around the nails and entire wrist.
5. Rinse the hands well under warm running water.
6. Dry the hands well with paper towels, turn off the water faucet with a paper towel, and discard the towels.
7. Apply lotion as desired.

Gloving

Why?

Gloves protect the wearer from getting organisms on the hands. Because of the serious nature of the blood-to-blood diseases (hepatitis B and AIDS), we are taking extraordinary precautions to prevent the remote and unlikely possibility of transmitting one of these diseases in the school setting when body discharges containing blood are being handled.

When?

1. Whenever you are handling blood (including menstrual blood), semen (from pupils who masturbate and come into contact with staff), or vaginal secretions
2. Whenever you have an open sore or cut on your hand and you are handling body fluids
3. Whenever cleaning up a spill of blood or semen
4. When changing a diaper or cleaning fecal material (This topic will be discussed in lesson three.)
5. When cleaning up vomitus, saliva, or urine

How?

1. Use a clean pair of gloves for each contact with a pupil.
2. Remove gloves by grasping the cuff and then stripping the glove off by turning it inside out.
3. Dispose of gloves in double plastic bags.
4. Wash hands after removing gloves.

Cleaning Up Spills

Why?

To prevent the spread of infectious disease in the school setting

When?

When there is blood or semen on a person, environmental surface, or object

How?

1. Gloves must be worn to clean up all spills of blood or semen.
2. A large amount of liquid to be cleaned up should first be absorbed with sawdust or a similar commercially prepared product.
3. The area to be cleaned should be cleaned with soap and water and disposable towels.
4. After the area has been cleaned with soap and water, it should be disinfected with an EPA-approved disinfectant.
5. The towels, sawdust, and gloves used in cleanup should be discarded in a double plastic bag.
6. Your hands must always be washed afterward.

Maintaining Personal and Classroom Cleanliness

Why?

To protect yourself and the pupils from the spread of infectious disease in the classroom

How?

Maintain personal health with a regular daily pattern of health-promoting behavior:

1. Eat, sleep, exercise, and use preventive vaccines to enhance your immune system's ability to fight infections.
2. Wash your hands frequently.
3. Wear gloves when you are handling blood spills.
4. Do not share personal items such as combs, lipstick, or toothbrushes.
5. Keep fingernails clean and trimmed short.
6. Do not wear jewelry at work that could harbor germs.
7. Refrain from kissing pupils.

When?

When handling food and utensils during preparation, serving, storage, and cleanup

How?

1. Keep an area used for preparing and serving food clean and separate from the area for cleanup of dirty dishes and utensils.
2. Scrape food from soiled dishes into a plastic-lined waste receptacle. Dishes need to be rinsed and placed in a dishpan filled with warm, soapy water and washed as soon as possible.
3. Wash the dishes in warm, soapy water. If an automatic dishwasher is not available, soak them for one minute in a solution of household bleach (one part bleach to ten parts water) after washing with soap and water.

When?

When cleaning classroom equipment and furniture

How?

1. Use soap and water to clean surfaces and follow with a disinfectant if the surfaces have spills of fluids from the body.
2. Use EPA-approved disinfectants or a fresh mixture of household bleach (one part bleach to ten parts water).

Diapering

Why?

To prevent the spread of infectious diseases in the school setting

When?

Whenever changing diapers or the clothing of a pupil who has been incontinent

How?

1. Make sure that all needed materials are at hand before beginning a procedure.
2. Wear gloves if the pupil has had a bowel movement.
3. Place the pupil on a changing table on a large disposable towel, securing him or her with a safety belt.
4. Loosen the diaper and wash the perineal area, using wet wipes only once. Wash from the vaginal to the rectal area.
5. Raise the pupil's legs, remove the diaper (place it on a corner of the disposable towel); then wash the buttocks area.
6. Place the soiled diaper in a plastic bag and discard the bag in a covered receptacle.
7. Remove the dry towel from underneath the buttocks.
8. Remove and discard gloves if you are wearing them. Wash your hands before you touch the pupil or a clean diaper.
9. Place a clean diaper on the pupil.
10. Wash the pupil's and your hands and return the pupil to class.
11. Return and wash the table top with disinfectant; rinse and dry the surface.
12. Wash your hands.

Toileting

Why?

To prevent the spread of infectious diseases in the school setting

When?

Whenever assisting a pupil with toileting

How?

1. Put all needed materials in a convenient place before starting a procedure.
2. Have the pupil sit on a toilet or potty seat. Never leave the pupil unattended. He or she should sit no longer than ten minutes.
3. Teach the pupil how to wipe himself or herself (from front to back) after the pupil has finished.
4. Clean the perineal and rectal areas with wet disposable towels if the pupil has not wiped the area completely clean.
5. Have the pupil wash the hands before he or she leaves the bathroom.
6. Disinfect the toilet or potty seat and rinse and dry the surface.
7. Empty the potty bowl and rinse it.
8. Wash your hands.

Health and Safety Code **Section 199.42**

Personally identifying information confidentiality; disclosure; discovery; compelled production; civil penalty; employment or insurance use

(a) Public health records relating to acquired immune deficiency syndrome (AIDS), containing personally identifying information, which were developed or acquired by state or local public health agencies shall be confidential and shall not be disclosed, except as otherwise provided by law for public health purposes or pursuant to a written authorization by the person who is the subject of the record or by his or her guardian or conservator.

(b) State or local public health agencies may disclose personally identifying information in public health records, as described in subdivision (a), to other local, state, or federal public health agencies or to corroborating medical researchers, when the confidential information is necessary to carry out the duties of the agency or researcher in the investigation, control, or surveillance of disease, as determined by the state or local public health agency.

(c) Any disclosure authorized by subdivision (a) or (b) shall include only the information necessary for the purpose of that disclosure and shall be made only on agreement that the information will be kept confidential and will not be further disclosed without written authorization, as described in subdivision (a).

(d) No confidential public health record, as described in subdivision (a), shall be disclosed, discoverable, or compelled to be produced in any civil, criminal, administrative, or other proceeding.

(e) Any person who willfully or maliciously discloses the content of any confidential public health record, as described in subdivision (a), to any third party, except pursuant to a written authorization, as described in subdivision (a), or as otherwise authorized by law, shall be subject to a civil penalty in an amount not less than one thousand dollars ($1,000) and not more than five thousand dollars ($5,000) plus court costs, as determined by the court, which penalty and costs shall be paid to the person whose record was disclosed.

(f) In the event that a public health record, as described in subdivision (a), is disclosed, the information shall not be used to determine employability, or insurability of any person.
(Added by Stats. 1987, c. 56, §105)

Health and Safety Code Section 199.81

Providing information to school districts on AIDS, AIDS related conditions, and Hepatitis B; vaccination costs covered by employee health plan benefits

The State Department of Education shall provide information to school districts on acquired immune deficiency syndrome (AIDS), on AIDS-related conditions, and on Hepatitis B. This information shall include, but not be limited to, any appropriate methods school employees may employ to prevent exposure to AIDS and Hepatitis B, including information concerning the availability of a vaccine to prevent contraction of Hepatitis B, and that the cost of vaccination may be covered by the health plan benefits of the employees. This information shall be compiled and updated annually, or if there is new information, more frequently, by the State Department of Education in conjunction with the State Department of Health Services and in consultation with the California Conference of Local Health Officers. In order to reduce costs, this information may be included as an insert with other regular mailings to the extent practicable, and the information required to be provided on Hepatitis B shall be provided in conjunction with the information required to be provided on AIDS.

(Added by Stats. 1986, c. 1461, §1. Amended by Stats. 1987, c. 916 §1.)

Brace

Definition: An appliance used to support a body part; an orthesis

Purposes: To protect weakened muscles, to prevent and correct deformities, to contain involuntary muscle movements, and to immobilize and protect a diseased or injured joint

Essential steps	*Key points and precautions*
At the start of the school day, observe the pupil with a brace.	
Inquire whether the brace can be removed at school.	If the brace cannot be removed at school, you will have to notify the parents of your concerns. The parents will need to follow up.
Listen when a pupil complains of pain caused by a brace.	Notify the parents and/or a physician.
Examine the skin under the brace for:	If permissible, remove the brace and skin covering.
No redness	Replace the brace as needed, being sure that no wrinkles are in the socks and the toes are straight.
A large area of redness over well-padded skin	This condition is probably all right unless the area is very red.
A small area of redness over a bony prominence	Leave the brace off for 20 to 30 minutes.
Persistent redness over a body prominence	Notify the parents if redness lasts more than 30 minutes.
Blister or skin breakdown	Do not use the brace; notify the physician and parents.
Examine the brace itself for:	
Deterioration	Note worn areas, the condition of straps and buckles, and missing or loose screws.
Fit of the pupil's shoes	Look at the condition of the heels and soles and the fit in general.
Breaks	Look for cracks in the plastic, dents in the metal, and missing screws.
Cleanliness	Remind the pupil or parent to clean the brace at night.
Determine the ability of the staff and the pupil to manage the brace.	
Don (to put on)	Watch the pupil put the brace on. Make sure that the skin is clean, dry, and protected with a stocking, stockinette, T-shirt, and so forth. **Make sure that no wrinkles appear.**
Doff (to take off)	Watch the pupil remove the brace. Pay attention to the skin.
Storage for the brace	Be sure that the brace is out of the way, but accessible, not hung.

Brace (Continued)

Essential steps	*Key points and precautions*
Care for and repair of the brace	Keep the brace away from heat and agents that could damage it.
Assess the pupil's ability to manage with a brace.	Has the pupil's condition improved, deteriorated, or remained the same?
Has the pupil's functioning changed over time? Are the pupil's activities appropriate for his or her abilities?	
Document on a pupil's health record or treatment log an account of your care.	Record the date and time, your assessment and actions, the pupil's actions and reactions, and any problems.

Cane

Definition: Device used as an aid in walking

Purpose: To lessen the force on weight-bearing joints, to give lateral balance while walking, and to achieve forward restraint during ambulation

Equipment: As prescribed

Essential steps	*Key points and precautions*
Determine the need for assistance with a cane at school.	Obtain recommendations from a physician or physical therapist or both.
Verify whether the pupil will use one or two canes.	Follow procedures as ordered by the physician. Two canes are used when the pupil needs additional support.
Confirm the type of cane and type of handle that the pupil should be using.	Follow procedures as ordered by the physician. Types of canes are straight, quad, four-point, and folding. Shapes of handles are pistol grip, T-grip, knobbed, and shepherd's crook.
Check the fit of the cane for the pupil's height.	Have the pupil stand with the elbow on his or her strong side flexed in a 30 degree angle. Have the cane tip 6 inches (15 cm) to the side of the little toe. The handle should be approximately level with the greater trochanter (hip).
The pupil should walk with the cane on the strong side of the body. Keep the cane fairly close to the body to avoid leaning on the cane.	Follow procedures as ordered by the physician. If the pupil cannot hold the cane with the hand opposite the weak leg, he or she can hold the cane on the same side as the weak leg and advance both the cane and weak leg together.
Observe the pupil going up stairs.	Follow procedures as ordered by the physician.
To go up stairs: Step up with the strong leg. Then bring the cane and the weak leg to that stair.	Remember that "the good go up and the bad go down." If the pupil cannot negotiate the stairs, refer to the physician for assistance in teaching stair-climbing techniques.
To go down stairs: Place the cane and the weak leg on the lower stair. Step down with the strong leg. If the pupil has not mastered stair climbing, arrange for him or her to have a pass to use the school elevator.	Use the elevator if it is available. Less possibility exists for injury to the pupil or to others on the stairs.
Teach the following safety points:	
1. Make sure that rubber cane tips are in good repair.	Rubber cane tips should be wide and provide good suction. Replace them promptly if they become worn.
2. Check screws and nuts often that are used in specialized canes.	They loosen with hard use.
3. Have a designated place in the classroom for the cane.	A cane could be a safety hazard for other pupils and staff.
4. Keep the hands free to maneuver the cane.	Use a backpack to carry materials. When possible, have another pupil assist in carrying books.
5. Arrange for the pupil to leave each class five minutes early.	This arrangement enables the pupil to be clear of the hall during regular passing periods.

Cast

Definition: A solid mold of a part of the body usually applied directly to the involved part

Purpose: To immobilize the body part in the desired anatomical position

Essential steps	*Key points and precautions*
Observe the pupil with a cast at the start and end of each school day.	
Examine the limb(s) above and below the cast for:	Compare this area with other parts of the body affected by the cast.
Skin color	The skin should be the same color as that of the rest of the body.
Capillary refill	Press the nailbed firmly; then release quickly. The nail should turn pink again immediately. Compare the response in the matching limb.
Peripheral pulse	Should be strong and equal bilaterally.
Skin temperature	Should be warm and the same as the matching limb.
Swelling	Should be none or lessening.
Bruising	Should be none or lessening.
Movement of the digits	The fingers should move as well as they had on the previous day.
Drainage	A spot of drainage on the cast means that a wound has drained enough to soak through. This situation requires reporting.
Odor	Foul odor means trouble inside the cast, such as an opened wound, pressure or sore, and so forth. These conditions need to be reported.
Examine the condition of the cast itself for:	
Color	Remove soil with scouring powder on slightly moistened cloth. Dry the area immediately. This procedure is usually done at home.
Intact surface	Look for cracks, dents, or chips. If they are present, report the condition to parents or to the physician.
Hardness	Check for soft spots from moisture or another source. If they are present, report the condition to the parent or physician.
Edges	Be sure that the edges of the cast are not sharp or crumbly. The cast may have petals of waterproof adhesive tape.
Objects inside the cast	Pull skin taut; use a flashlight to look under the cast if the pupil complains of pain or irritation. Never put anything down inside a cast.
The Function of the Cast	
Is the cast working as intended?	
Is there movement of the body within the cast?	**Notify the parent and/or physician if the cast has deteriorated or if it becomes so loose that the body part is no longer immobilized.**
Can the pupil maintain an appropriate activity level?	Note whether the pupil is able to function adequately despite the cast.

Cast (Continued)

Essential steps	*Key points and precautions*
Ask the pupil how he or she feels regarding:	
Pain	May indicate formation of a pressure area. Report this condition.
Pressure	May result from swelling and edema. Report this condition.
Sensation	Numbness and tingling can mean nerve damage. Report this condition.
Fever	If an infection develops, suspect a decubitus ulcer or wound infection. Report this condition.
Itching	May be relieved by blowing cool air under the cast with a hair dryer or asepto syringe.Tapping the outside of the cast may also relieve the symptom.
Skin rashes	Check for irritation, infection, contamination, and infestation.
Diet	Encourage good nutrition for healing, and have the pupil drink lots of fluids. Keep food out of the cast.
Coping skills	How is pupil managing activities of daily living, such as putting on outer clothing, getting transportation, and so forth?
Document your care on the pupil's health record or treatment log.	Record the date and time, your assessment, your actions, the pupil's actions and reactions, and any problems.

Crutches

Definition: A crutch; most often used in pairs, is a support used as an aid in walking.

Purpose: To promote mobility and independence and to prevent injury to an affected limb

Equipment: Adjustable crutches, rubber crutch tips, axillary arm pads, safety waist belt, or tape measure as ordered

General Information on Crutch Gaits

Four-point alternate crutch gait: A slow but stable gait, it can be used only by the pupil who can move each leg separately and bear considerable weight on each one.

Sequence: Right crutch, left foot; left crutch, right foot

Two-point alternate crutch gait: This gait is slightly faster, but it requires more balance than the four-point gait.

Sequence: Right crutch and left foot; left crutch and right foot

Three-point gait: This gait is fairly rapid, but it requires more strength and balance because the arms must support the body's entire weight.

Sequence: Both crutches and the weak extremity are moved forward simultaneously; then the strong extremity is moved forward while most of the body's weight is put on the arms.

Tripod crutch gaits: These gaits are slow and labored while the tripod position is maintained.

Sequence: Tripod alternate crutch gait: right crutch, left crutch; drag the body and legs forward.

Sequence: Tripod simultaneous crutch gait on both crutches: drag the body and legs forward.

Swinging crutch gaits: Both legs are lifted off the ground simultaneously and swung forward while the pupil pushes up on the crutches.

Sequence: Swinging-to gait: bear weight on the good leg. Advance both crutches forward simultaneously, while leaning forward, and swing the body to a position even with the crutches.

Sequence: Swinging-through gait: advance both crutches forward; lift both legs off the ground and swing forward landing in advance of the crutches; bring crutches forward rapidly to prevent being caught off balance.

Essential steps	*Key points and precautions*
Determine the need for assistance with crutches at school.	Obtain recommendations from physician or physical therapist or both.
Assess the pupil's knowledge of the use of crutches.	
Check the crutches for appropriate length when the pupil is standing erect.	When the tip is 4 inches (10 cm) in front of and 6 inches (15 cm) to the side of the pupil's toes, the arm piece should be 2 inches (5 cm) from the axilla. Even though the axillary arm pads lessen pressure on the inside of the upper arm and the thoracic wall, their use may encourage the pupil to rest on them and not to put pressure on his or her hands.

Crutches (Continued)

Essential steps	*Key points and precautions*
Teach the pupil, if necessary, the tripod stance to help him or her to stand with balance and stability.	Wearing well-fitted, low-heeled, and rubber-soled shoes, the pupil should stand with the feet slightly apart and crutches placed 8 to 10 inches (20 to 25 cm) in front of and to the side of the toes.
Check the hand piece so that the pupil's elbows have 20 to 30 degrees of flexion when the arm piece is two finger widths below the axilla.	Prevent brachial nerve paralysis by showing the pupil how to extend and stiffen the elbows to place the body weight on the palms, never on the axilla.
Check to see whether the crutches are labeled with the pupil's name.	
Verify that the pupil is using the crutch gait prescribed by the physician.	The gait varies with the type and severity of the disability, the pupil's general condition, the strength of the arm and trunk, and the extent of balance.
Review of Stair Climbing	If the pupil cannot negotiate the stairs, refer to the physician for assistance in teaching the stair-climbing technique.
1. To go up stairs	Remember that "the good go up and the bad go down." Advance the good leg up to the next step, then the crutches, and finally the weak leg.
2. To go down stairs	Place the crutches on the next lower step; then lower the weak leg and finally step down with the good leg.
If the pupil has not mastered stair climbing, arrange for him or her to have a pass to use the elevator.	Use the elevator if it is available. The possibility of injury to the pupil or to others on the school stairs is avoided.
Review of Safety Points	
1. Make sure that rubber crutch tips are in good repair.	They should be wide and provide good suction. Replace promptly if worn.
2. Check screws and nuts often.	These fasteners loosen with hard use.
3. Have a designated place in the classroom for the crutches.	Crutches could be a safety hazard for other pupils and staff.
4. Keep the hands free to handle the crutches.	Use a backpack to carry materials.
5. Arrange for the pupil to leave each class five minutes early.	This arrangement enables the pupil to avoid crowded halls during regular passing periods.

Prosthesis

Definition: An artificial replacement for a missing portion of the body

Purpose: To replace a missing body part, to foster independence, and to aid development and self-care

Essential steps	*Key points and precautions*
Observe the pupil with a prosthesis at the start and end of the school day.	
Learn the reason for the prosthesis.	Trauma, birth defect, illness, or other circumstances may be the reason.
Learn about the specific prosthesis.	Consult with the physician, therapist, prosthetist, pupil, or parent. Read literature from the manufacturer.
Share what you have learned with appropriate school staff.	Respect the pupil's confidentiality. Make sure that staff members have the information they need to help this pupil.
Determine whether the prosthesis can be removed at school.	Review the physician's or physical therapist's recommendations.
If the prosthesis cannot be removed at school, notify the parents about your concerns.	Parents will follow up at home.
Examine the skin covered by the prosthesis for:	If there is a concern and if it is permitted, remove the prosthesis and stump sock.
No redness	Replace the prosthesis as needed. **Make sure that no wrinkles appear on the stump sock.**
A large area of redness on well-padded skin	This condition is probably all right unless the area is very red.
A small area of redness over a bony prominence	Leave the prosthesis off for 20 to 30 minutes.
Persistent redness over a bony prominence	Notify the parents if redness lasts more than 30 minutes.
Blister or skin breakdown	Do not use the prosthesis. Notify the physician and parents.
Examine the prosthesis itself for:	
State of repair	
Cleanliness	
Odor	
Determine the staff member's and pupil's abilities to manage the prosthesis.	
Don (to put on)	Check the skin of the limb. Apply a stockinette before you put on the prosthesis; align the prosthesis properly. **Make sure that no wrinkles appear on the stump sock.**

Prosthesis (Continued)

Essential steps	*Key points and precautions*
Doff (to take off)	Have the pupil remove the prosthesis for showers and swimming.
Gait and/or function and fit	Observe the prosthesis in use.
Assess the pupil's ability to manage with a prosthesis.	
How does the pupil tolerate the prosthesis?	Does the pupil wear the prosthesis regularly?
What is the pupil's level of activity and involvement in school?	Does the pupil participate to the level of his or her ability?
What are the pupil's short-term and long-term goals?	Does the pupil have goals and activities to be accomplished?
Document your care on the pupil's health record or treatment log. Notify the parents and/or physician of your concerns.	Record the date and time, your assessment, your actions, the pupil's actions and reactions, and any problems.

Walker

Definition: A framework used to support a convalescent or disabled individual while he or she is walking

Purpose: To provide more stability than either a cane or crutches and to enable the person to begin ambulation

Equipment: As prescribed

Essential steps	*Key points and precautions*
If the pupil requires a walker at school, verify that he or she is using the type of walker prescribed by a physician.	Obtain recommendations from a physician or therapist or both. The standard pick-up walker is a rigid framework, but its height is adjustable. A mobile walker has wheels on the legs to roll forward. A rollator walker has wheels in the front and rubber-tipped legs in the back. A swivel-type walker is hinged so that the right and left sides move independently.
Check the walker for appropriate height. Teachers are not trained to do this.	The pupil should stand erect in line with the rear legs of the walker. The elbows should be flexed about 30 degrees when the hands are on the grips.
Observe the pupil while he or she uses the walker.	Place the walker forward, less than an arm's length, and take a step with each leg. The pupil's body should not be in contact with the front crossbar.
Do not allow the pupil to use the walker on the stairs.	The walker cannot safely be used on stairs and inclines.
Arrange for the pupil to have a pass to use the school elevator.	Without access to an elevator, the pupil may need to have all classes on the ground floor.
Teach the following safety points:	
1. Make sure that rubber walker tips are in good repair.	The tips should be wide and provide good suction. **Replace tips promptly if they are worn.**
2. Check screws and nuts often.	These fasteners loosen with hard use.
3. Have a designated place for the walker in the classroom.	A walker could be a safety hazard for other pupils and staff.
4. Keep the hands free to maneuver the walker.	Use a backpack to carry materials.
5. Arrange for the pupil to leave each class five minutes early.	This arrangement enables the pupil to avoid crowded halls during regular passing periods.

Wheelchair

Definition: A chair mounted on a frame with two large wheels at the back and two small wheels in front for use by an ill or disabled individual

Purpose: To transport a person who cannot or should not walk and to provide mobility and independence for a nonambulatory individual

Equipment: As ordered

Essential steps	*Key points and precautions*
Help the pupil to transfer from a wheelchair to a cot.	
Place the wheelchair next to the cot at a 45 degree angle. Lock the wheels.	Place the wheelchair so that the pupil will move toward his or her strongest side.
1. Bring the pupil's head and shoulders toward the edge of the wheelchair.	Have the pupil do as much of the maneuver as he or she can safely.
2. Bring the pupil's feet and legs to edge of the wheelchair into position.	
3. Keep your body aligned properly with your back straight, not rigid, your knees bent, and your weight evenly balanced on both feet. Straighten your knees while bringing the pupil toward you.	Pay attention to your body's mechanics to protect your back.
Help the pupil to sit on the edge of the cot.	
1. Roll the pupil on his or her side, facing you. Bend the pupil's knees.	Have the pupil do as much of the maneuver as he or she can safely.
2. Reach one arm over in back of the pupil's knees.	
3. Place your other arm well under the pupil's neck and shoulder areas.	
4. Facing the side of the cot, shift your weight to your leg that is toward the pupil's feet, and swing them toward you over the edge of the cot. Pull the pupil's shoulders so that the pupil is in a sitting position.	Position your feet with a wide base of support, and lower your center of gravity by bending your knees.

Wheelchair (Continued)

Essential steps	Key points and precautions
5. Remain in front of the pupil with both of your hands supporting him or her.	Allow the pupil to sit for two minutes while you observe for orthostatic hypotension,* dizziness, and so forth. Do not leave the pupil until you are sure that he or she is stable.
Help the pupil to stand.	
1. Lock the wheelchair's wheels.	Make certain that the pupil can safely bear weight.
2. Tell the pupil to move to the front of the cot or chair, and put his or her hands on the chair's arms or cot's edge. If a pupil is wearing a brace, unlock it.	Have the pupil do as much of the maneuver as he or she can safely.
3. Place one of your knees between the pupil's knees. If he or she has a weak knee, brace it with your knee.	You should be close to the cot or chair with your feet providing a broad base of support.
4. Tell the pupil to put the strong foot slightly under himself or herself.	
5. Tell the pupil that on the count of three, he or she is to push down with the arms, lean forward, and stand up.	Be sure to use a verbal cue so that you can work together.
6. Hold the pupil closely.	
7. On the count of three, rock your weight to your back foot, bringing the pupil forward to standing.	
8. Have the pupil lock the knees if he or she is wearing a brace.	
9. Give pupil time to balance; then pivot the pupil slowly until his or her back is toward the chair.	
Assist the pupil to sit in a wheelchair.	
1. Lock the wheelchair's wheels.	
2. Remind the pupil to feel the chair with the back of his or her legs.	Have the pupil do as much of this maneuver as he or she can safely. If the pupil is wearing a brace that has been locked at the knees, unlock it.
3. Tell the pupil to reach back for the arms of the chair.	

*Orthostatic hypotension is the lowered blood pressure that occurs when one changes from a supine to an erect position.

Essential steps	Key points and precautions
4. Shift your weight to your forward leg, and guide the pupil as he or she bends the knees and sits in the chair.	Place the pupil's buttocks at the back of the chair's seat.
5. Make sure that the pupil is safe and secure.	Use a seatbelt or harness if needed.
Assist the pupil to use a transfer (sliding) board.	
Definition: A transfer board is a polished light-weight board used to bridge the gap between a cot and chair or any transfer space.	Purpose: To allow the pupil to transfer when the muscles are not strong enough to lift the body's weight.
1. Place one side of the board under the pupil's buttocks. Place the other side on the surface to which the pupil is going.	
2. Tell the pupil to push down on the seating surface with the hands, shift the buttocks, and slide or wiggle across the board and off the other end onto the new surface.	
Teach wheelchair safety points.	
1. Regularly check the rear wheels for movement with the brakes locked.	Brakes become ineffective when they are out of alignment. Fix them.
2. Make sure that the seatbelt is fastened.	Ask for assistance if needed.
3. Both feet should be on the footrests.	Ask for assistance if needed.
4. The pupil's arms and legs must be within the width of the chair when the wheelchair is going through a doorway.	
5. Always lock the brakes when the wheelchair is stopped.	Follow this procedure even if the wheelchair is empty.
6. Always push the wheelchair at a walking speed. **Do not hot rod!**	Take extra caution on gravel, grass, or uneven ground because the front wheels can get stuck, making the chair tip forward.
7. Never tilt the wheelchair way back, turn sharply, or stop too rapidly.	

Wheelchair (Continued)

Essential steps	*Key points and precautions*
8. Move a wheelchair from the back when going down ramps and curbs.	Be sure that both wheels go over the curb together so that the chair does not tip.
9. Push a wheelchair forward when going up ramps and curbs.	Tip the chair back just enough for the front wheels to clear the curb.
10. Always hold on to the wheelchair when pushing it.	
11. Arrange for the pupil to leave each class five minutes early.	This arrangement enables the pupil to avoid crowded halls during regular passing periods.

Appendix A

Program Modifications

This appendix contains modifications to the educational program for pupils with specialized physical health care needs. Suggestions for modifying programs follow:

1. Allow tape recording of class discussion, lectures, or homework.
2. Allow the pupil to tape-record homework assignments.
3. Alter the amount of information the pupil is to learn.
4. Schedule an extra study hall or time with a resource specialist.
5. Allow the pupil to assume different positions while in class; for example, if the pupil has difficulty breathing while seated, allow him or her to stand.
6. Provide two sets of textbooks for use at school and at home, thereby removing the need for the pupil to carry books to and from school.
7. Set aside a private area for the provision of the specialized health care service or medication.
8. Schedule rest periods when needed.
9. Extend the time for assignments to be completed.
10. Provide alternative means to show competence in a course for credit or grades; for example:
    a. Assign additional readings or reports when the class must be missed.
    b. Give tests in a controlled environment at school or have school staff or a volunteer proctor them at home.
    c. Allow, when necessary, the minimum number of hours needed for course credit rather than the preferred maximum.
    d. Present course requirements and development of skills in a contract to be signed by the pupil, parent, and teacher at the beginning of the semester or as soon as the pupil's condition has been diagnosed.
    e. Use competency-based assessments for the pupil to demonstrate mastery of the class or skill.
11. Pace activities according to the pupil's attention span or physical stamina.
12. Modify the length of the school day; for example, one-half day attendance or fewer periods in high school.

Appendix B

Sample Forms

Parent's Request for Having Specialized Physical Health Care Services Provided

We (I), the undersigned, the parent(s)/guardian(s) of _____
(Name of pupil) *(Birth date)*

request that the following specialized physical health care service be administered to our child in accordance with *Education Code* Section 49423.5. We understand that the school administrator will appoint a qualified designated person(s) who, in accordance with *Education Code* Section 49423.5, will be performing the health care service listed above *and that any nonlicensed qualified designated person(s) who performs the service will do so under the supervision of a qualified school nurse, public health nurse, or qualified licensed physician and surgeon.*

We understand that in performing this service, the designated person(s) will be using a procedure that has been approved by our physician:

_____ ( )
(Name of physician) *(Telephone number)*

_____
(Street) *(City)* *(State)* *(ZIP code)*

We understand that we are responsible for providing and bringing all necessary supplies and equipment, correctly labeled, with proper directions for use at school.

We will notify the school immediately if our child's health status changes, we change physicians, or the procedure is changed or canceled. We understand that any change in procedures must be received in writing from the physician listed above.

We understand that, whenever possible, the specialized physical health care service must be provided before or after school hours.

The school is authorized to provide emergency medical services for my child whenever the need for such services is deemed necessary. The school cannot accept a "do nothing" or "no code" authorization.

Signature of:

_____
(Father/Guardian) *(Date)*

_____
(Mother/Guardian) *(Date)*

Address:

_____
(Street) *(City)* *(State)* *(ZIP code)*

Telephone (Work): ( ) _____ ( ) _____

Telephone (Home): ( ) _____ ( ) _____
(Father/Guardian) *(Mother/Guardian)*

Request for Physician's Authorization for Specialized Physical Health Care Services Performed at School

Name of pupil: _____ Birth date: _____

Dear Dr. _____

The parent or guardian of the pupil listed above has requested that a specialized physical health care service be performed at school. Please complete the "Physician's Authorization" on the back of this form as soon as possible and return it to the school address given below. **For this procedure to be performed at school, you must verify that it cannot be scheduled for other than during school hours.**

You must realize that the individual performing the procedure may or may not be a licensed registered nurse. The school administrator has the authority to designate another school employee to perform such services. In addition, the classroom personnel have other children for whom they are responsible. If you believe that the specialized physical health care service must be performed by licensed personnel, please indicate this information on the back of this form.

The child may need to be transported a long distance to and from school, and the only caretaker may be the bus driver. Several children may be on the bus. If you feel that this situation is inappropriate for the child, please indicate this information on the back of this form.

Please notify the school immediately if the order for the procedure(s) changes or if you are no longer treating this pupil. For your convenience, a sample copy of the procedure has been attached for your review.

Thank you for your prompt attention to this matter. Please be advised that the service cannot be provided until your orders have been received.

_____ _____ ( ) _____

(Signature of parent) *(Date)* *(Telephone number)*

Parent's Authorization for Exchange of Information

To Whom It May Concern:

I hereby give my permission for the exchange of confidential information contained in the record of my child:

_____ _____

(Name) *(Birth date)*

between _____ and _____

(Name of physician) *(Name of school district)*

_____ _____ _____ _____

(Signature of father/guardian) *(Date)* *(Signature of mother/guardian)* *(Date)*

Please return to: _____

(Principal/School nurse)

_____

(Name of school)

_____

(Street) *(City)* *(State)* *(ZIP code)*

Physician's Authorization

Name of pupil: Birth date:

Address:

(Street) *(City)* *(State)* *(ZIP code)*

I, the undersigned, as the physician for the above-named student, do recommend and approve the following procedure(s) to be provided to this pupil during school hours:

1. Name and description of procedure(s):

2. The physical condition(s) of this pupil is (are):

3. The procedure(s) is (are) to be provided according to the following time schedule or PRN (as necessary):

   and should be continued until:

4. Please check one item and sign the attached procedure:
   - ☐ a. I have reviewed and approved the attached procedure as written.
   - ☐ b. I have reviewed and approved the attached procedure with my modifications, which I have noted.
   - ☐ c. I have attached my recommendations or orders for the procedure.
5. Please list any signs or symptoms that may indicate an emergency situation. List the emergency procedures.

6. List any concerns about transporting the student on the school bus.

7. I understand that the procedures:
   - a. Must be ones that can be learned in a reasonable amount of time
   - b. Should not require the presence of a physician, medical judgment based on extensive medical training, or an undue amount of time to be provided or performed
   - c. Must be provided or performed during the school day so that the pupil can attend school or benefit from his or her educational program
   - d. Must be ordered by a licensed physician and surgeon
8. The medical justification for providing the procedure(s) during school hours is:

Signature of physician:

Address: *(Date)* ( ) *(Telephone number)*

(Street) *(City)* *(State)* *(ZIP code)*

Intake Questionnaire–Chronically Ill Pupils

(Basic information needed to answer questions for the individualized education program [IEP])

All questions in this document need to be answered *prior to* the IEP team meeting.

The following set of questions is intended to assist in gathering the information needed by the administrative staff, student study team, or individualized education program team in determining the level of support or site modifications needed to serve the pupil safely in the least restrictive environment.

A medically qualified professional should review the following current medical reports, when available, and synthesize the information for the individualized education program team for review prior to the team meeting:*

- ☐ Completed health and developmental history
- ☐ Outside medical evaluation or hospital workup that includes:
  - ☐ 1. Diagnosis or prognosis
  - ☐ 2. Physical restrictions
  - ☐ 3. Preferential seating
  - ☐ 4. Medication
  - ☐ 5. Length of school day
  - ☐ 6. Diet and feeding techniques
  - ☐ 7. Emergency precautions
  - ☐ 8. Therapy
  - ☐ 9. Toileting
  - ☐ 10. Equipment
  - ☐ 11. Counseling

After talking with the parent and observing the pupil, the medically qualified professional should answer the following:

1. What do the parents or guardians understand about the pupil's condition and needs?

2. Describe the general appearance of the pupil:

3. How does the pupil communicate his or her needs?

4. How does the pupil move about at home and at school?

5. Other information:

**Medically qualified* as used in this document refers to a credentialed school nurse, public health nurse, or physician.

Medical Background

✤ 1. In lay terminology, what is the pupil's medical problem (diagnosis)?*

_____

_____

✤ 2. What are the predictive patterns (or signs) of expected change relative to the progression of the medical condition?

_____

_____

a. When should the nurse or teacher inform the parent or physician of the occurrence of the physical signs denoting changes in the pupil?

_____

_____

b. Do a specific set of symptoms indicate that emergency procedures should be implemented? ☐ Yes ☐ No
If yes, describe the symptoms and attach a list of emergency procedures to the IEP.

_____

_____

✤ 3. What are the risks for this child in coming to school (for example, exposure to childhood diseases or length of time for transportation)?

_____

_____

✤ 4. Does the pupil need specialized physical health care services (SPHCS) performed during the school day?
☐ Yes ☐ No

a. If yes, what are the SPHCS? _____

_____

_____

b. Has an individualized procedure been developed and signed by the physician? ☐ Yes ☐ No

c. What level of training is necessary for the provider of the SPHCS?

_____

5. Does the pupil's behavior affect the potential for delivery of the SPHCS? ☐ Yes ☐ No

a. If the answer is yes, in what way?

_____

b. What precautions should the staff take to avoid health risks to others in view of the pupil's behavior?

_____

_____

*Questions marked with ✤ will need to be considered with recommendations from the pupil's physician.

✣ 6. How does the medical problem affect the pupil's ability for physical movement?

_____

_____

_____

7. List any restrictions on the pupil's participation in:

School activities	*Physical activities (e.g., body contact sports)*
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

8. For transfer pupils (from another school system or state) with an active IEP requiring SPHCS, are there any state or local policies in conflict with the SPHCS specified on the IEP? If so, explain. (Conflicts must be resolved before the pupil can be placed.)

_____

_____

9. Does the pupil require special assistance to use the bathroom? ☐ Yes ☐ No

   a. If yes, what specifically needs to be done?

   _____

   b. If lifting the pupil is necessary, what is a safe technique to use?

   _____

10. Other information:

_____

_____

_____

_____

_____

Specialized Care, Equipment, or Provider

Specialized physical health care services (SPHCS) **include only those services that must be provided during the school day** to assist the pupil to benefit from education or to attend school. All necessary equipment must be in place **before** a pupil begins school. Prior to the pupil's first day of attendance, staff must be trained and certified as competent to use the equipment.

1. Does the pupil perform his or her own SPHCS? ☐ Yes ☐ No
   If no, can the pupil be taught to perform the procedure? ☐ Yes ☐ No.
2. ✣ Who is currently responsible for providing the SPHCS:*
   ☐ Parent? ☐ MediCal? ☐ Insurance? ☐ Regional center? ☐ Other? (name): _____
   Will the responsible party continue to provide the service for the pupil in the school setting?
   ☐ Yes ☐ No
3. Are special equipment and/or supplies needed for the SPHCS? ☐ Yes ☐ No
   If yes, please list.

   _____

   _____

   a. Do the supplies or equipment: ☐ Stay at school? ☐ Go home?
   b. How will the parent provide for checking and maintaining the equipment and keeping it in functioning condition?

      _____

      _____

   c. Who will deliver the equipment to the school? _____
   d. Is backup equipment needed? ☐ Yes ☐ No
      If yes, when will the parent deliver the equipment to the school? _____

      _____

4. ✣ In addition to the SPHCS, must any other special considerations be observed; for example, fluid intake, nutrition, rest, and positioning?

   _____

   _____

5. What plan needs to be developed for equipment or personnel to be provided for the pupil in the school environment?

   _____

   _____

6. What plan needs to be developed for equipment or personnel to follow the pupil across school environments?

   _____

   _____

7. How much time during the pupil's school day will be needed to perform the SPHCS? _____

*Questions marked with ✣ will need to be considered with recommendations from the pupil's physician.

Medication

The physician's orders for medication and the parental authorization should be reviewed and updated every school year (more frequently if indicated by a specific pupil's condition.)

✣ 1. What medication is being taken?* _____

a. How long has the pupil been taking the medication? _____

b. What is the total daily dosage? _____

_____

✣ 2. How does the medication affect the pupil?

_____

a. What is the desired effect of the medication? _____

_____

b. Describe any side effects. _____

_____

c. What are the consequences of not taking the medication? _____

_____

_____

d. If medication is taken at school, by what method will it be given:

☐ Oral? ☐ Rectal?
☐ Injection? ☐ Gastro tube?
☐ Inhalant? ☐ Other: _____

3. How will the medication be delivered to the school? _____

_____

4. Does the school have storage facilities for the medication? ☐ Yes ☐ No
If no, what plans have been developed for the safekeeping of the medication?

_____

_____

_____

_____

_____

*Questions marked with ✣ will need to be considered with recommendations from the pupils' physician.

Emergency Plan

Pupil's attendance at school should begin only after an emergency plan has been developed and approved. This section should be addressed jointly by the parent, medically qualified professional, teacher, and administrator.

✤ 1. *Types of emergencies** — *Steps to be taken*

a. Equipment failure? _____ _____

_____ _____

b. Medication regimes? _____ _____

_____ _____

c. Illnesses? _____ _____

_____ _____

d. Other medical complications or conditions _____

(for example, allergic reactions)? _____ _____

_____ _____

e. Transportation? _____ _____

_____ _____

2. Is there a signed authorization for emergency treatment on file? ☐ Yes ☐ No

If no, obtain the authorization before services begin.

a. Do these statements conflict with the school's policy? ☐ Yes ☐ No

If yes, how will this conflict be resolved? _____

_____

b. Is there parental agreement to assume financial responsibility for implementation of the emergency plan? ☐ Yes ☐ No

Note: If a parent requests a "no code" for his or her child, the school nurse or principal should explain that schools must protect the health and safety of *all* schoolchildren. Therefore, when a pupil appears to be in a medical crisis, the school must either implement an emergency procedure specific to the pupil's needs, call 911, or transport the pupil to the nearest emergency facility.

If such a medical crisis occurs for a pupil for whom a parent has requested a "no code," the school shall send the pupil to the nearest emergency facility and notify the parents *immediately* of the action taken.

3. How close are the nearest emergency medical services (EMS) to the proposed educational sites?

What is the response time? _____

4. Will the EMS personnel have the necessary equipment with them and the training to perform the specialized physical health care service? ☐ Yes ☐ No

If no, inform the individualized education program team. If the pupil is enrolled in school, the IEP must indicate that the only emergency procedure is to transport the pupil to the nearest emergency facility.

*Questions marked with ✤ will need to be considered with recommendations from the pupils' physician.

Transportation

The school nurse or the person responsible for collecting the "Intake Questionnaire–Chronically Ill Pupils" should be able to complete this page from the information already gathered. If not, additional questions will need to be asked so that the form may be completed and sent to the transportation unit as quickly as possible.

1. What is the approximate length of the bus ride and tolerance to heat or cold that the pupil can safely withstand as related to the pupil's condition?

   _____

   _____

2. Are there any bus conditions that are essential for the safe transport of the pupil: ☐ Yes ☐ No

   ☐ Lift?
   ☐ Infant seat?
   ☐ Personal oxygen tank?
   ☐ Seat belt?
   ☐ Specialized seat?
   ☐ Support vest?
   ☐ Wheelchair tie-downs?

3. Is specialized equipment needed while the bus is en route? ☐ Yes ☐ No
   If yes, describe:

   _____

   _____

4. Must space be planned for transporting the equipment? ☐ Yes ☐ No
   If yes, how much space is needed?

   _____

   _____

5. Will the bus driver need an individual emergency plan for this pupil? ☐ Yes ☐ No
   If yes:

   a. Identify the person responsible for transmitting the emergency plan to be given to the bus driver.

   _____

   b. Identify who will explain the procedure to the bus driver.

   _____

6. Does the pupil have any allergic reactions, such as to bee stings and so forth, of which the driver should be aware? ☐ Yes ☐ No
   If yes, what are they and what are the symptoms? _____

7. Is there a special way to lift or handle the child during an emergency evacuation? ☐ Yes ☐ No
   If yes, describe: _____

   _____

8. Is the child diabetic? ☐ Yes ☐ No
   If yes, who will obtain the emergency diabetic kit to be placed on the bus? _____

9. Do the parents and the school staff have a behavior management plan that the bus driver should use?
   ☐ Yes ☐ No If yes, attach the plan to this page.

10. Will medication for the pupil be transported on the bus? ☐ Yes ☐ No
    Identify the medication: _____

Site Information

The school nurse or the person responsible for the collection of the "Intake Questionnaire–Chronically Ill Pupils" should be able to complete this page from the information already gathered. If not, appropriate questions need to be asked so that the form may be completed and sent to the sites being considered. Any question that is answered no must be resolved prior to enrolling the pupil at the site. Resolution of site problems should not cause undue delay in enrolling the pupil at school.

1. Is it necessary to clean and store specialized equipment at school? ☐ Yes ☐ No
   If yes, how will this activity be accomplished?

   _____

   _____

2. Are adequate space and privacy available to provide SPHCS? ☐ Yes ☐ No
   If no, what space is necessary to provide the service?

   _____

   _____

3. Is an emergency power system required for life support? ☐ Yes ☐ No
   If yes:
   a. What emergency power does the site have?

      _____

      _____

   b. If the power source is a generator, is there sufficient power to operate the equipment? ☐ Yes ☐ No
   c. How long is the time lag before the generator starts? _____
4. Explain special processes needed to dispose of any contaminated materials.

   _____

   _____

5. Is there an accessible bathroom? ☐ Yes ☐ No
6. Is the bathroom located at a reasonable distance from the classroom? ☐ Yes ☐ No
7. Is the bathroom set up to handle the pupils' needs? ☐ Yes ☐ No
   If no, list what modifications must be made to accommodate the pupils.

   _____

   _____

   _____

8. Is water available in the bathroom? ☐ Yes ☐ No
9. Is water available in the classroom? ☐ Yes ☐ No
10. Is feeding handled apart from diaper changing; for example, are there separate sinks for washing hands, dishes, or contaminated materials? ☐ Yes ☐ No
11. Is there a place to dispose of contaminated materials; for example, soiled diapers, bibs, and so forth?
    ☐ Yes ☐ No
12. Is there a place to clean equipment for gavage feeding, changing catheters, tracheostomy tubes, and so forth?
    ☐ Yes ☐ No
13. Are there disposable gloves for staff to use when the pupil is changed, fed, and so forth? ☐ Yes ☐ No

Summary

This form is to be completed by qualified school personnel prior to the IEP team meeting for a pupil needing specialized physical health care services.

Name of pupil: _____ Birth date: _____

1. Medical diagnosis with explanation: _____

2. Cognitive level of pupil (ability to learn self-care): _____

3. Specialized physical health care service(s) to be done at school (personnel able to perform procedure):

4. Medication(s): _____

5. Physical restriction(s)/feeding/toileting requirements: _____

6. Emergency precautions: _____

7. Transportation requirements: _____

8. Additional comments, concerns, or plans: _____

_____ _____
(Signature) *(Date)*

Specialized Physical Health Care Service

Daily Log of Treatment Administered

Name _____ Birth date _____ School _____

Procedure _____ From _____ 19___ To _____ 19___

Physician _____ Phone _____

Date ___/___/___			Date ___/___/___			Date ___/___/___		
Time	Comment	Init.	Time	Comment	Init.	Time	Comment	Init.
Date ___/___/___			Date ___/___/___			Date ___/___/___		
Time	Comment	Init.	Time	Comment	Init.	Time	Comment	Init.
Date ___/___/___			Date ___/___/___			Date ___/___/___		
Time	Comment	Init.	Time	Comment	Init.	Time	Comment	Init.
Date ___/___/___			Date ___/___/___			Date ___/___/___		
Time	Comment	Init.	Time	Comment	Init.	Time	Comment	Init.
Date ___/___/___			Date ___/___/___			Date ___/___/___		
Time	Comment	Init.	Time	Comment	Init.	Time	Comment	Init.

Signatures	Title	Date

Directions:

Use one sheet per procedure and attach the standardized procedure to each sheet.
Person administering specialized physical health care shall initial in space daily and include identifying signature at bottom of page only one time.
If student is absent or if for any reason procedure is not done, indicate in "comment" column.
This form shall be included in student's cumulative health record.
Additional comments should be entered on the back of the sheet.
Person supervising the procedure is to sign on days he or she is present in "signature" spaces at bottom.

Date	Comments
/ /	
/ /	
/ /	

Appendix C

Pediatric Consultants and Nursing Personnel

This appendix presents information for pediatric consultants and nursing personnel working in school districts. Material for pediatric personnel provides information for facilitating the liaison between the pediatric consultant and the district, a list of resource persons from the American Academy of Pediatrics for California, and a sample contract for a pediatric consultant in a school district.

Also appearing is a statement from the American Academy of Pediatrics, "Qualifications and Utilization of Nursing Personnel Delivering Health Services in Schools." This statement examines the health problems that school nurses must deal with, the role of the school nurse in dealing with these problems, and standards for school nursing.

Pediatric Consultants for School Districts

Many pediatricians have consulted with school districts and have developed mutually satisfactory working relationships. The following comments are intended to stimulate the formation of additional liaisons which should benefit children, especially those with special needs:

1. It is important that a school district always contact a child's personal physician first in efforts to obtain or to update information concerning health matters, including related services.
2. It is essential for the school district's pediatric consultant to communicate with the child's personal physician.
3. An important role for a school district's pediatric consultant is to be available to interpret medical reports and/or to answer the general questions of school staff about medical matters, especially as they relate to special education. The consultant should, of course, participate in in-service training programs for special education staff and for regular education teachers whose classroom enrollments include children with special needs.
4. Such a consultant should have special interest and knowledge in developmental disabilities, learning disabilities, and behavioral pediatrics. Sensitivity to cultural differences is also important.
5. Consultation should be paid for by the school district or school consortium.

"Pediatric Consultants for School Districts" was adopted from a statement from the American Academy of Pediatrics by representatives from the American Academy of Pediatrics for California, District Nine, 1980. "Pediatric Consultants for School Districts" was official policy in 1980 and reaffirmed in 1990.

Resource Persons from the American Academy of Pediatrics

Listed below are the names of the chapter administrators in California. Contact them and ask for a list of school consultants or for the name of the chairperson of the committee on school health or the committee on children with disabilities.

Chapter One

All of northern California from Visalia north is included in Chapter One.

Beverly Busher
1125 A St., Suite 210
Phone: 415-459-4775
San Rafael, CA 94901

Chapter Two

All of the greater Los Angeles area between Orange County and Visalia on the north is included in Chapter Two.

Eve Black
P.O. Box 2134
Phone: 213-757-1198
Inglewood, CA 90304

Chapter Three

The greater San Diego area makes up Chapter Three.

Sharon W. Robertson
8001 Frost St.
Phone: 619-569-8816
San Diego, CA 92123

Chapter Four

Orange County makes up Chapter Four.

Debbie Monfea
P.O. Box 1297
Phone: 714-978-2415
300 S. Flower
Orange, CA 92668

Sample Contract

Pediatric consultant for _____ School District

Description of Contractor's Services

In consideration of the compensation for all work and services, the contractor, _____, M.D., shall:

Serve as a member of the individualized education planning team in determining the specialized physical health care needs of high-risk children, act as a liaison between the school and the child's private health care provider, and provide consultant services for school nurses concerning children with exceptional health care needs and problems.

As requested by the administrator, the contract consultant will:

- Review medical records and requests for specialized physical health care services.
- Interpret medical information for the school nurse or other team members.
- Serve as a member of the individualized education planning team for high-risk children.
- Assist the school nurse in developing and implementing specialized physical health care plans.
- Provide information and interpretation, as needed, for parents of children with specialized health care needs.
- Review and approve specialized health care plans and/or procedures and placements of pupils in the home and hospital.
- Serve as a liaison between the school and the child's private health care provider.
- Assist in providing staff development; for example, in-service training sessions.
- Be available to school nurses for consultation regarding exceptional health problems (by telephone or on site).
- Provide examinations as needed for specialized programs.

Signatures

_____ _____

Superintendent of Schools or Designee *Date*

_____ _____

Contractor *Date*

This form was developed by Maxine Sehring, M.D., Pediatric Consultant, American Academy of Pediatrics for California, District Nine, 1980.

Qualifications and Utilization of Nursing Personnel Delivering Health Services in Schools

The demands of school nursing services have grown rapidly in recent years. Nursing personnel who work on a day-to-day basis with schoolchildren should have the expertise required to meet these ever-increasing demands.

Today's school nurse should be equipped to assess health problems related to infectious diseases, such as immunodeficiency and herpes, pregnancy, drug and alcohol abuse, child abuse (including sexual abuse), chronically disorganized families, mental illness, depression and suicide, eating disorders, physical and learning disabilities, athletic injuries, poor nutrition, and chronic disease. It is important that the school nurse be able to recognize and manage minor illnesses, offer skilled health counseling and guidance, detect potential health problems, make appropriate medical referrals, and act as the personal physician's extension in the school setting to meet the health needs of the child patient during the school day.

Schoolchildren with Disabilities

The mandates of Public Law 94-142 create an additional need for professional nursing services in schools. Children with varying degrees of disabilities are now in the regular school setting. Many of these students require specialized caretaking procedures, such as tracheostomy suctioning, catheterization, ostomy care, . . . or maintenance of orthopedic devices.[1] Some children require administration of medications with varying side effects, in varying amounts, and at varying times during the school day. It is often important that a professional school nurse assess the problem, consult with the child's physician or school medical consultant, and administer the physician-prescribed services.

In preschool programs and in classrooms for the severly disabled, the professional school nurse, working with the child's regular physician, the school medical consultant, or a local health officer, should provide in-service instruction regarding prevention of the spread of infectious disease and provide supervision of handwashing, diapering, custodial concerns, and methods of food handling.

Some school districts have hired health aides and/or licensed vocational nurses to meet the school health needs of students and staff. These paraprofessionals are not equipped to recognize, assess, manage, or make appropriate referrals for the myriad health problems now being handled in schools. If paraprofessionals are used to perform specialized caretaking procedures, the school physician or school nurse should determine competence, conduct in-sevice training, and then provide regular supervision and documentation of the paraprofessionals' competence.

Standards for School Nursing Service

The American Academy of Pediatrics (AAP) supports the goal of professional preparation for school nurses. Qualifications for the professional school nurse should include licensure as a registered nurse and a baccalaureate degree from an accredited college or university. Additionally, a process should exist by which certification/licensure for the school nurse is established by the appropriate state board.[2]

The AAP further recommends use of school nurses, not paraprofessionals, to deliver day-to-day nursing services and health counseling to children in schools. When paraprofessionals are part of the school health team, their performance of nursing services should be directly supervised by a professionally prepared and licensed school nurse.

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This statement has been approved by the Council on Child and Adolescent Health. *Pediatrics* (ISSN 0031 4005).

[1] R.L. Jenkins, "New School Nurse: Facilitator to Learning," *School Nurse*, (Fall, 1983), 6.

[2] National Association of School Nurses: Resolutions and Policy Statements. National Association of School Nurses, Incorporated, July, 1986.

Appendix D

Selected Laws and Regulations

This appendix contains pertinent sections from the *Business and Professions Code*, the *Education Code*, and the *California Code of Regulations, Title 5, Education*. Section 2725 ("Legislative Declaration; Practice of Nursing; Functions") from the *Business and Professions Code* is presented. These sections from the *Education Code* appear: Section 49400, "Health and Physical Development of Pupils"; Section 49401, "Supervision"; Section 49422, "Supervision of Health and Physical Development of Pupils"; Section 49423, "Administration of Prescribed Medication for Pupil"; Section 49423.5, "Specialized Physical Health Care Services"; and Section 49426, "School Nurses; Qualifications; Services."

From the *California Code of Regulations, Title 5, Education*, Section 3030, "Eligibility Criteria" is presented. From this same code, as part of Section 3051 "Standards for Designated Instruction and Services," the following sections appear: Section 3051.4, "Instruction in the Home or Hospital"; Section 3051.12, "Health and Nursing Services"; and Section 3051.17, "Services for Pupils with Chronic Illnesses or Acute Health Problems."

Business and Professions Code

Section 2725. Legislative Declaration; Practice of Nursing; Functions

In amending this section at the 1973–74 session, the Legislature recognizes that nursing is a dynamic field, the practice of which is continually evolving to include more sophisticated patient care activities. It is the intent of the Legislature in amending this section at the 1973–74 session to provide clear legal authority for functions and procedures which have common acceptance and usage. It is the legislative intent also to recognize the existence of overlapping functions between physicians and registered nurses and to permit additional sharing of functions within organized health care systems which provide for collaboration between physicians and registered nurses. Such organized health care systems include, but are not limited to, health facilities licensed pursuant to Chapter 2 (commencing with Section 1250) of Division 2 of the *Health and Safety Code*, clinics, home health agencies, physicians' offices, and public or community health services.

The practice of nursing within the meaning of this chapter means those functions, including basic health care, which help people cope with difficulties in daily living which are associated with their actual or potential health or illness problems or the treatment thereof which require a substantial amount of scientific knowledge or technical skill, and includes all of the following:

(a) Direct and indirect patient care services that insure the safety, comfort, personal hygiene, and protection of patients; and the performance of disease prevention and restorative measures.

(b) Direct and indirect patient care services, including, but not limited to, the administration of medications and therapeutic agents, necessary to implement a treatment, disease prevention, or rehabilitative regimen ordered by and within the scope of licensure of a physician, dentist, podiatrist, or clinical psychologist, as defined by Section 1316.5 of the *Health and Safety Code*.

(c) The performance of skin tests, immunization techniques, and the withdrawal of human blood from veins and arteries.

(d) Observation of signs and symptoms of illness, reactions to treatment, general behavior, or general physical condition, and (1) determination of whether such signs, symptoms, reactions, behavior, or general appearance exhibit abnormal characteristics; and (2) implementation, based on observed abnormalities, of appropriate reporting, or referral, or standardized procedures, or changes in treatment regimen in accordance with standardized procedures, or the initiation of emergency procedures.

"Standardized procedures," as used in this section, means either of the following:

(1) Policies and protocols developed by a health facility licensed pursuant to Chapter 2 (commencing with Section 1250) of Division 2 of the *Health and Safety Code* through collaboration among administrators and health professionals, including physicians and nurses;

(2) Policies and protocols developed through collaboration among administrators and health professionals, including physicians and nurses, by an organized health care system which is not a health facility licensed pursuant to Chapter 2 (commencing with Section 1250) of Division 2 of the *Health and Safety Code*. Such policies and protocols shall be subject to any guidelines for standardized procedures which the Division of Allied Health Professions of the Board of . . . California and the Board of Registered Nursing may jointly promulgate; and if promulgated shall be administered by the Board of Registered Nursing.

Nothing in this section shall be construed to require approval of standardized procedures by the Division of Allied Health Professions of the Medical Board of California or the Board of Registered Nursing.

(Amended by Stats. 1974, c. 355, p. 686, Sec. 1; Stats. 1974, c. 913, p. 1927, Sec. 1; Stats. 1978, c. 1161, p. 3639, Sec. 172; Stats. 1980, c. 406, p. 793, Sec. 1. Stats. 1989, c. 886 §52)

Education Code

Section 49400. Health and Physical Development of Pupils

The governing board of any school district shall give diligent care to the health and physical development of pupils, and may employ properly certified persons for the work.

(Stats. 1976, c. 1010, Sec. 2, operative April 30, 1977)

Section 49401. Supervision

The governing board of any school district may provide for proper health supervision of the school buildings and pupils enrolled in the public schools under its jurisdiction.

(Stats. 1976, c. 1010, Sec. 2, operative April 30, 1977)

Section 49422. Supervision of Health and Physical Development of Pupils

No physician, psychiatrist, oculist, dentist, dental hygienist, optometrist, otologist, podiatrist, audiologist, or nurse not employed in . . . that capacity by the State Department of . . . Health Services, shall be, nor shall any other person be, employed or permitted to supervise the health and physical development of pupils unless he or she holds a services credential with a specialization in health or a valid credential issued prior to the operative date of the amendment to this section enacted at the 1970 Regular Session of the Legislature.

. . . . . .

The services credential with a specialization in health authorizing service as a school nurse shall not authorize teaching services unless the individual holds a baccalaureate degree, or its equivalent, and has completed a fifth year of preparation.

No physician employed by a district to perform medical services pursuant to Section 44873, shall be required to hold a credential issued by the State Board of Education or commission, provided he or she meets the requirements of Section 44873.

(Amended by Stats. 1981, c. 714, p. 2616, Sec. 94)

Section 49423. Administration of Prescribed Medication for Pupil

Notwithstanding the provisions of Section 49422, any pupil who is required to take, during the regular school day, medication prescribed for him [or her] by a physician, may be assisted by the school nurse or other designated school personnel if the school district receives (1) a written statement from such physician detailing the method, amount, and time schedules by which such medication is to be taken; and (2) a written statement from the parent or guardian of the pupil indicating the desire that the school district assist the pupil in the matters set forth in the physician's statement.

(Stats. 1976, c. 1010, Sec. 2, operative April 30, 1977)

Section 49423.5. Specialized Physical Health Care Services

(a) Notwithstanding the provisions of Section 49422, any individual with exceptional needs who requires specialized physical health care services, during the regular school day, may be assisted by the following individuals:

(1) Qualified persons who possess an appropriate credential issued pursuant to Section 44267, or hold a valid certificate of public health nursing issued by the State Department of Health Services; or

(2) Qualified designated school personnel trained in the administration of specialized physical health care, provided they perform such services under the supervision of a school nurse, public health nurse, or licensed physician and surgeon.

(b) Specialized health care or other services that require medically related training shall be provided pursuant to the procedures prescribed by Section 49423.

(c) Persons providing specialized physical health care services shall also demonstrate competence in basic cardiopulmonary resuscitation and shall be knowledgeable of the emergency medical resources available in the community in which the services are performed.

(d) "Specialized physical health care services" as used in this section include catheterization, gavage feeding, suctioning, or other services that require medically related training.

(e) Regulations necessary to implement the provisions of this section shall be developed jointly by the State Department of Education and the State Department of Health Services, and adopted by the State Board of Education.

(Added by Stats. 1978, c. 1220, p. 3943, Sec. 2)

Section 49426. School Nurses; Qualifications; Services

A school nurse is a registered nurse currently licensed under Chapter 6 (commencing with Section 2700) of Division 2 of the *Business and Professions Code*, and who has completed the additional educational requirements for, and possesses a current credential in, school nursing pursuant to Section 44877.

School nurses strengthen and facilitate the educational process by improving and protecting the health status of children and by identification and assistance in the removal or modification of health-related barriers to learning in individual children. The major focus of school health services is the prevention of illness and disability, and the early detection and correction of health problems. The school nurse is especially prepared and uniquely qualified in preventive health, health assessment, and referral procedures.

Nothing in this section shall be construed to limit the scope of professional practice or otherwise to change the legal scope of practice for any registered nurse or other licensed healing arts practitioner. Rather, it is the intent of the Legislature to provide positively for the health services, many of which may be performed in the public schools only by physicians and school nurses. School nurses may perform, if authorized by the local governing board, the following services:

(a) Conduct immunization programs pursuant to Section 49403 and assure that every pupil's immunization status is in compliance with the law, including parental or guardian consent, and good health practice.
(b) Assess and evaluate the health and developmental status of pupils to identify specific physical disorders and other factors relating to the learning process, communicate with the primary care provider, and contribute significant information in order to modify the pupils' educational plans.
(c) Interpret the health and developmental assessment to parents, teachers, administrators, and other professionals directly concerned with the pupil.
(d) Design and implement a health maintenance plan to meet the individual health needs of the students, incorporating plans directed by a physician.
(e) Refer the pupil and his or her parent or guardian to appropriate community resources for necessary services.
(f) Maintain communication with parents and all involved community practitioners and agencies to promote needed treatment and secure reports of findings pertinent to educational planning.
(g) Interpret medical and nursing findings appropriate to the student's individual educational plan and make recommendations to professional personnel directly involved.
(h) Consult with, conduct in-service training to, and serve as a resource person to teachers and administrators, and act as a participant in implementing any section or sections of a comprehensive health instruction curriculum for students by providing current scientific information regarding nutrition, preventive dentistry, mental health, genetics, prevention of communicable diseases, self-health care, consumer education and other areas of health.
(i) Counsel pupils and parents by:
    (1) Assisting children and youth, parents and school personnel in identifying and utilizing appropriate and mutually acceptable private and community health delivery services for professional care and remediation of defects.
    (2) Counseling with parents, pupils, and school staff regarding health-related attendance problems.
    (3) Helping parents, school personnel, and pupils understand and adjust to physical, mental and social limitations.
    (4) Exploring with families and pupils, attitudes, information and values which affect their health behavior.
(j) Assist parents and pupils to solve financial, transportation and other barriers to needed health services.

California Code of Regulations, Title 5, Education

Section 3030. Eligibility Criteria

(f) A pupil has limited strength, vitality or alertness, due to chronic or acute health problems, including but not limited to a heart condition, cancer, leukemia, rheumatic fever, chronic kidney disease, cystic fibrosis, severe asthma, epilepsy, lead poisoning,

diabetes, tuberculosis and other communicable infectious diseases, and hematological disorders such as sickle cell anemia and hemophilia which adversely affects a pupil's educational performance. In accordance with Section 56026(e) of the *Education Code*, such physical disabilities shall not be temporary in nature as defined by Section 3001(v).

The following sections are part of Section 3051. "Standards for Designated Instruction and Services (DIS)":

. . . . . .

Section 3051.4. Instruction in the Home or Hospital

(a) Special education and related services provided in the home or hospital for school-age pupils is limited to those pupils who have been identified as individuals with exceptional needs in accordance with Section 3030 and for whom the individualized education program team recommends such instruction or services.

(b) Instruction may be delivered individually, in small groups or by teleclass.

(c) For those individuals with exceptional needs with a medical condition such as those related to surgery, accidents, short-term illness or medical treatment for a chronic illness, the individualized education program team shall review, and revise, if appropriate, the individualized education program whenever there is a significant change in the pupil's current medical condition.

(d) When recommending placement for home instruction, the individualized education program team shall have in the assessment information a medical report from the attending physician and surgeon or the report of the psychologist, as appropriate, stating the diagnosed condition and certifying that the severity of the condition prevents the pupil from attending a less restrictive placement. The report shall include a projected calendar date for the pupil's return to school. The individualized education program team shall meet to reconsider the individualized education program prior to the projected calendar date for the pupil's return to school.

(e) Instruction in the home or hospital shall be provided by a regular class teacher, the special class teacher or the resource specialist teacher, if the teacher or specialist is competent to provide such instruction and services and if the provision of such instruction and services by the teacher or specialist is feasible. If not, the appropriate designated instruction and services specialist shall provide such instruction.

(f) The teacher providing the home instruction shall contact the pupil's previous school and teacher to determine:

(1) The coursework to be covered;
(2) The books and materials to be used;
(3) Who is responsible for issuing grades and promoting the pupil when appropriate;
(4) For pupils in grades seven to twelve, the teacher shall confer with the school guidance counselor to determine:
(A) The hours the pupil has earned toward semester course credit in each subject included in the individualized education program and the grade as of the last day of attendance;
(B) Who is responsible for issuing credits when the coursework is completed;
(C) Who will issue the diploma if the pupil is to graduate.

[Authority cited: Section 56100(a) and (i), *Education Code*]

3051.12. Health and Nursing Services

(a) Health and nursing services may include:*
(1) Providing services by qualified personnel
(2) Managing the individual's health problems on the school site
(3) Consulting with pupils, parents, teachers, and other personnel
(4) Group and individual counseling with parents and pupils regarding health problems
(5) Maintaining communication with health agencies providing care to individuals

(b) Specialized physical health care may be provided as described in *Education Code* Section 49423.5.
(1) Definitions
(A) Specialized physical health care services means those health services prescribed by the child's licensed physician and surgeon

*Section 3051.12 of the *California Code of Regulations, Title 5, Education*, implements the provisions of *Education Code* Section 49423.5.

requiring medically related training for the individual who performs the services and which are necessary during the school day to enable the child to attend school.

(B) Standardized procedures means protocols and procedures developed through collaboration among school or hospital administrators and health professionals, including licensed physicians and surgeons and nurses, to be utilized in the provision of the specialized physical health care services.

(C) Qualified means ability to demonstrate competence in Cardiopulmonary Resuscitation, current knowledge of community emergency medical resources, and skill in the use of equipment and performance of techniques necessary to provide specialized physical health care services for individuals with exceptional needs. In addition:

1. "Qualified" for the professional school or public health nurse or licensed physician and surgeon shall mean trained in the procedures to a level of competence and safety which meets the objectives of the training.
2. "Qualified" for the designated school personnel shall mean trained in the procedures to a level of competence and safety which meets the objectives of the training as provided by the school nurse, public health nurse, licensed physician and surgeon, or other programs which provide the training.

(D) Supervision means review, observation, and/or instruction of a designated school person's performance and of physical health care services, but does not necessarily require the immediate presence of the supervisor at all times.

1. Immediate supervision means that the supervisor shall be physically present while a procedure is being administered.
2. Direct supervision means that the supervisor shall be present in the same building as the person being supervised and available for consultation and/or assistance.
3. Indirect supervision means that the supervisor shall be available to the qualified designated school person either in person or through electronic means to provide necessary instruction, consultation, and referral to appropriate care and services as needed. Supervision of designated school persons shall include review on site by a qualified school nurse, qualified public health nurse, or qualified licensed physician and surgeon. Supervision shall also include review of the competence of that individual in performing the specialized health care service, maintenance of appropriate records, physical environment, and equipment.

(E) Training means preparation in the appropriate delivery and skillful performance of specialized physical health care services. In addition:

1. Medically related training of credentialed school nurses or public health nurses shall be that training in an approved program which may be necessary to update or make current the nurse's professional skills and knowledge related to meeting pupils' needs for specialized physical health care services.
2. Medically related training of employed designated school personnel is that training in an approved program in standardized procedures provided by a qualified school nurse, qualified public health nurse, qualified licensed physician and surgeon, or other approved programs to enable the person to provide the specialized physical health care services necessary to enable the child to attend school.

(F) Competence in Cardiopulmonary Resuscitation means possession of a current valid certificate from an approved program.

(2) Standards and Staffing

(A) Allocation of qualified designated school personnel shall be determined by the amount and type of supervision necessary to this regulation, and also the type and frequency of services needed by students in special classes and centers, and regular instructional settings.

(B) Approved training for qualified personnel shall be provided in one or more of the following ways:

1. By a qualified school nurse, qualified public health nurse or qualified licensed physician and surgeon, as defined in these regulations
2. By career and continuing education programs, approved by the appropriate licensing board
3. By training programs through public or private medical institutions; i.e., hospitals, public health agencies, Visiting Nurses Associations, and Red Cross

(3) Organization and Administration

(A) Specific continuing specialized physical health care services required in order for the individual to benefit from special education will be included in the individualized education program. If the parent elects to perform the service during the school day, a waiver shall be signed relieving the school of the responsibility.

(B) Appropriate accommodation for safety and necessary physical care services for the individual with exceptional needs in the school setting shall be provided by the school. Personal privacy and dignity of an individual with exceptional needs shall be assured.

(C) The school district shall not be required to purchase medical equipment for an individual pupil. However, the school district, special education local plan area, or county office is responsible for providing other specialized equipment for use at school that is needed to implement the individualized education program.

(D) In accordance with *Education Code* Section 49423.5(a)(2), a qualified school nurse, qualified public health nurse, or qualified licensed physician and surgeon responsible for supervising the physical health care of an individual with exceptional needs in the school setting shall:

1. Coordinate the health care services to the individuals with exceptional needs on the school site.
2. Consult with appropriate personnel regarding management of health care services for individuals with exceptional needs.
3. Make appropriate referrals and maintain communication with health agencies providing care to individuals with exceptional needs.
4. Maintain or review licensed physician and surgeon and parent requests and daily documentation records.

(E) Written licensed physician and surgeon and parent requests, as well as the specific standardized procedures to be used if physical health care services are provided, shall be maintained for each individual with exceptional needs. Daily documentation of specific services which are provided shall be maintained on a district-approved form which shall include the signatures of the qualified designated school person(s) who performs the procedure.

1. Any pupil who is required to have specialized physical health care services during the school day, prescribed for him or her by a licensed physician and surgeon, may be assisted by a qualified school nurse, qualified public health nurse, or other qualified school personnel, if the school district receives:

a. A written statement from the licensed physician and sur-

geon stating the procedure and time schedules by which such procedures are to be given; and

b. A written statement from the parent or guardian of the pupil, indicating the desire that the school district assist the pupil in the matters set forth in the licensed physician and surgeon's statement, and granting consent for the delivery of such services.

2. This written statement of a licensed physician and surgeon and parent requests and daily documentation shall be maintained in accordance with the requirements of confidentiality of pupil records, and are considered mandatory interim pupil records.

[Authority cited: *Education Code* sections 49423.5(c), 56100(a)(i); 20 *USC* 1414(c)(2)(B); 34 *CFR* 300.600]
[Reference: *Education Code* sections 49423.5, 56363(b)(12); 34 *CFR* 300.13(b)(10)]

Section 3051.17. Services for Pupils with Chronic Illnesses or Acute Health Problems

(a) Specialized services may be provided to pupils determined eligible pursuant to Section 3030(f). Such services include but are not limited to:

(1) Individual consultation;
(2) Home or hospital instruction; and
(3) Other instructional methods using advanced communication technology.

(b) For pupils whose medical condition is in remission or in a passive state, the individualized education program team shall specify the frequency for monitoring the pupil's educational progress to assure that the illness does not interfere with the pupil's educational progress.

(c) When a pupil identified pursuant to Section 3030(f) experiences an acute health problem which results in his or her nonattendance at school for more than five consecutive days, upon notification of the classroom teacher or the parent, the school principal or designee shall assure that an individualized education program team is convened to determine the appropriate educational services.

(d) If there is a pattern of sporadic illnesses, the individualized education program team shall convene to consider alternative means for the pupil to demonstrate competencies in the required course of study so that the cumulative number of absences do not prevent educational progress.

[Authority cited: Section 56100(a)(i), *Education Code*]
[Reference: Section 56563(a), *Education Code*; 34 *CFR* 300.14(a)(1)]

Glossary

Anaphylactic reaction. A severe, frequently fatal reaction to a foreign protein or drugs that occurs in an individual who has previously been sensitized to the substance. This reaction occurs during or shortly following injection.

Aphonia. Loss of the voice or absence of speech because of a disease or injury.

Apnea. Lack of breath or absence of respiration.

Arrhythmia. Any variation from the normal rhythm of the heartbeat either in time or force.

Aseptic. A condition in which living pathogenic organisms are absent.

Aspirate. Remove by negative pressure, suction, or aspiration.

Autolet.™ A device containing a lancet for pricking the finger.

Axilla. Underarm or armpit.

Axillary. Of, relating to, or located near the armpit.

Bladder, flaccid. Bladder having muscles without tone; i.e., relaxed or flabby.

Bladder, spastic. Bladder with increased muscle tone and exaggerated reflexes.

Bradycardia. A slow heart beat, usually less than 60 beats per minute.

Bronchodilator. An agent that causes expansion of the air passages of the lungs.

Bronchus. The windpipe that conveys air to and from the lungs.

Broviac catheter. A type of catheter used to provide total parenteral nutrition (TPN), chemotherapy, or frequent or continuous antibiotics.

Cubic centimeter (cc). A unit of measure: 5 cc. (5 ml) equals 1 teaspoon; 30 cc. (30 ml) equals 1 ounce.

Cannula. A tube that has a removable trochar and is inserted into a cavity. This tube provides a channel for breathing or removal of fluid.

Capillaries. Smallest blood vessels in the circulatory system.

Catheter. A hollow cylinder of rubber or other material used for draining fluid from body cavities or organs.

Cerebral vascular hemorrhage. Bleeding; a flow of blood into the largest portion of the brain.

Cardiopulmonary resuscitation (CPR). A system that combines techniques of hand pressure and breathing to revive an individual whose heart has stopped beating.

Credé's method. The use of manual pressure on the bladder to express urine.

Cuffed tube. A tracheostomy tube that has an inflatable balloon.

Cyanosis. A dark blue or purple discoloration of the skin and mucous membranes caused by deficient oxygenation of the blood.

Designated school personnel. A person employed by a school district.

Diabetes mellitus. A chronic metabolic disorder in which the ability to oxidize carbohydrates is more or less completely lost and normal insulin secretion is disturbed.

Diaphoresis. Perspiration; sweating.

Distention. The state of being enlarged.

Dysreflexia, autonomic. A condition that may affect any person with a complete spinal cord injury above the sixth thoracic vertabra. A stimulus initiates a reflex action of the sympathetic and parasympathetic systems, causing hypertension, which cannot be relieved by action of the vasomotor center because of the level of the spinal cord lesion. This response, if not controlled, can precipitate a cerebral vascular hemorrhage (stroke).

Edema. Accumulation of an excessive amount of fluid in the cells, tissues, or body cavities.

Epigastrium. The pit of the stomach; the upper central region of the abdomen.

Epinephrine. Adrenalin, the chief neurohormone of the adrenal medulla of most species.

Excoriation. A scratch or break in the skin.

Exudate. A fluid, which is often coagulable, or formed elements of the blood.

Fistula. An abnormal passage leading from a cavity or hollow organ to the body's surface or from one hollow organ to another and permitting passage of fluids or secretions.

Foley catheter. An individual catheter retained in the bladder by a balloon inflated with air or liquid.

Fowler's position. The position in which the head of the patient's bed is elevated 18 or 20 inches (4.6 to 5 dm).

Gastrostomy. Established artificial opening into the stomach.

Genitalia. The reproductive organs.

Glucagon. A protein hormone that promotes an increase in the sugar content of the blood by increasing the rate of glycogen breakdown in the liver. Glucagon is used for extreme hypoglycemia.

Glucometer. A device that measures the amount of sugar in the blood.

Hickman catheter. (See *Broviac catheter.*)

Humidifier. An apparatus for controlling humidity by adding to the moisture content in the air of a room.

Hyperalimentation. The ingestion or administration of greater than optimal amounts of nutrients.

Hyperglycemia. Abnormally increased content of sugar in the blood manifested by dry, warm, flushed skin; increased thirst or urination; hunger; vision changes; and weight loss.

Hyperventilation. Excessive rate and depth of respiration leading to an abnormal loss of carbon dioxide from the blood.

Hypoglycemic reaction. An abnormally low blood sugar level manifested by sweating, flushing or pallor, numbness, hunger, trembling, headache, and weakness.

Hypoxia. Decreased amount of oxygen in organs and tissues.

Indwelling catheter. A catheter left in place in the bladder.

Insulin. A protein hormone formed in the pancreas and secreted into the blood, where it regulates carbohydrate (sugar) metabolism.

Keto acidosis. Acidosis accompanied by the accumulation of ketone bodies in the body tissues and fluids.

Labia. Fleshy border or edge.

Levin's tube. A hollow tube introduced through the nose into the upper intestinal tract or canal.

Meatus. A general term for an opening or passageway in the body.

Nares. The nostrils or the opening of the nose or nasal cavity.

Nasogastric tube. The same as Levin's tube.

Nasopharynx. The upper portion of the pharynx, above the level of the palate.

Nupercainal ointment.™ An ointment applied to irritated skin.

Obturator. A structure that blocks an opening; also, a prosthesis used to close a congenital or acquired opening in the palate.

Oropharyngeal. Relating to the mouth and pharynx.

Os pubis. Bone above the genitals.

Ostomy. An artificial opening in the body.

Parasympathetic nervous system. The part of the nervous system concerned with stimulation of smooth muscle, cardiac muscle, and glands.

Patency. The condition of being wide open.

Percussion. A diagnostic or therapeutic procedure consisting of a succession of taps of varying force. The surface of a body part is tapped to learn the condition of its parts from the resultant sound. Also, cupped hands clapped over the chest are used during postural drainage.

Perineal area. The external surface lying between the vulva and anus in the female and scrotum and the anus in the male.

Peripheral. Situated away from the center of the body; for example, a wrist or foot.

Peristalsis. The wave-like movement of the intestine or other tubular structure.

Pharynx. The throat, the joint opening of the gullet, and windpipe.

Regurgitation. Backward flow of stomach contents up into the esophagus.

Residual urine. The urine that remains in the bladder after urination in disease of the bladder and hypertrophy of the prostate.

Sphygmomanometer. An instrument for measuring blood pressure in the arteries.

Sharps container. A rigid, tightly-lidded, leakproof, puncture-resistant container in which syringes, needles, and lancets are disposed.

Standardized procedures. Procedures used to cover overlapping functions between *registered nurses* and physicians. Such procedures do not apply to designated school personnel. Nurse practitioners, when performing under standardized procedures, are authorized to issue medical orders. Therefore, school personnel may accept orders to initiate or revise specialized physical health care services from nurse practitioners performing in this manner. Hospital clinics commonly employ nurse practitioners performing under standardized procedures. In certain private practice settings, this system is being used increasingly.

Stethoscope. An instrument by which respiratory, cardiac, intestinal, and other sounds are conveyed to the ear of the observer.

Stockinette. An elastic knitted fabric, usually cotton, used in making bandages or the like.

Stoma. An artificial opening between a cavity and the surface of the body.

Subcutaneously. Beneath the skin.

Suctioning. Aspiration, the act or process of sucking.

Systemic reaction. A reaction affecting the entire organism.

Thoracic level. At the level of the chest.

Total parenteral nutrition (TPN). Nutrition given by an intravenous catheter. Introduced otherwise than by way of the intestines.

Thrombophlebitis. Inflammation of a vein with secondary formation of blood clot.

Trachea. The part of the windpipe at the level of the disk between the sixth and seventh cervical vertebrae.

Tracheostomy tube. The tube which is inserted into an opening in the trachea to allow for passage of air to the lungs.

Trochar. A sharp-pointed instrument fitted with a cannula and used to insert the cannula into a body part as a drainage outlet.

Urethral area. The area around the urethra, the canal leading from the bladder through which urine is excreted.

Urticaria. Hives, rash, an eruption of itching wheals.

Xiphoid process. Sword-shaped cartilage at the end of the sternum.

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